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ABSTRACT

This publication is designed to illustrate how information about the effects of smoking can be incorporated into virtually all grade levels and curriculum areas. The book is organized into four parts. The first is a brief listing of basic facts related to cigarette smoking and its effect on health. Part Two covers units for grades kindergarten through eight. The third part of the booklet covers grades nine through twelve by subject area, such as art, mathematics, science. The final part of the booklet is the appendix. It contains coloring sheets, picture puzzles, games, songs, graphs, and an elementary lesson on chemical make-up of tobacco and tobacco smoke, as well as other teaching materials and techniques. (KJ)

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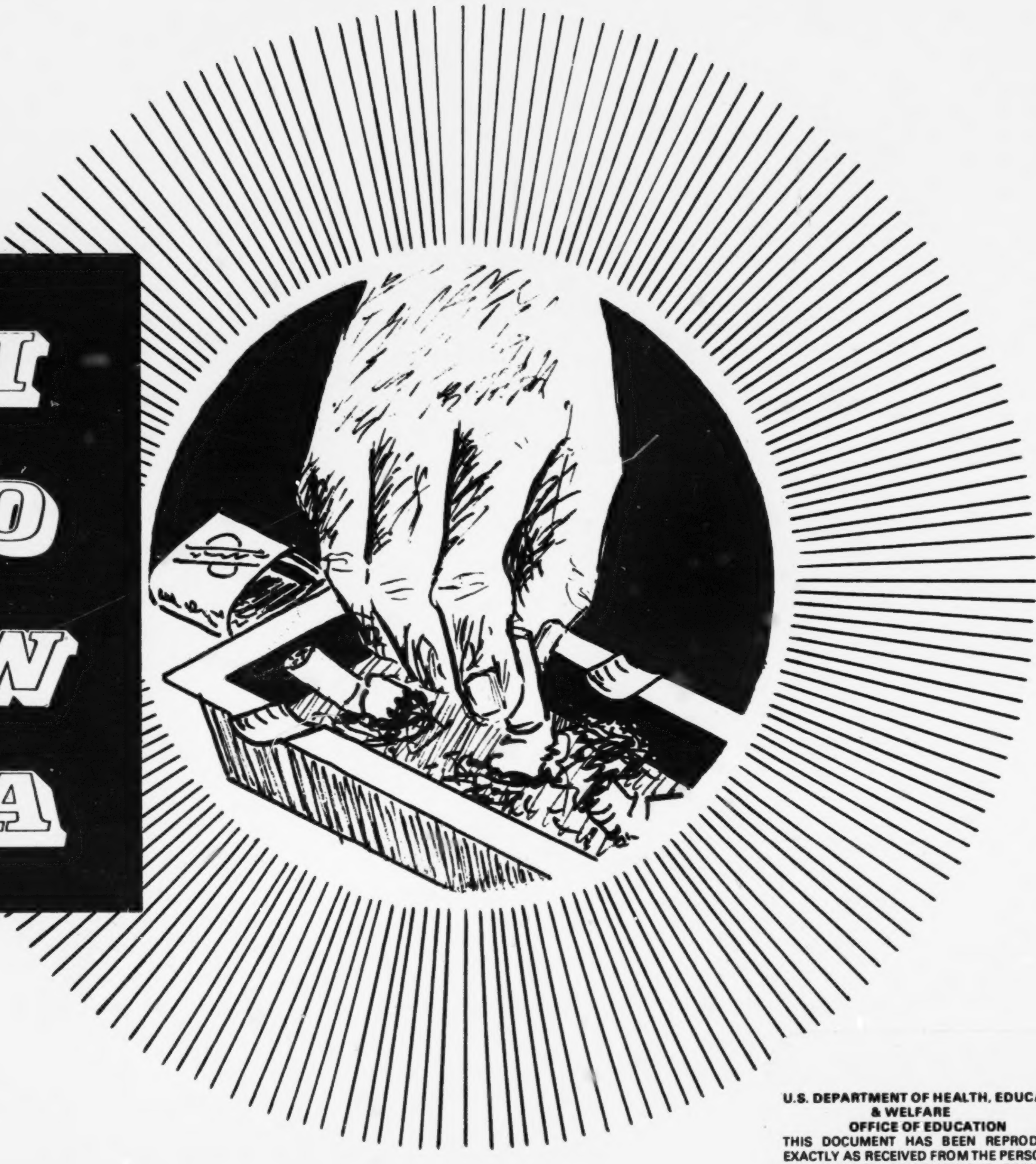

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SMOKING
A Social Dilemma

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Oliver T. Himley, Consultant, Elementary Education

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FOREWORD

Concern has been expressed in recent years by interested individuals and governmental agencies regarding the possible harmful effects of smoking. The Iowa Department of Public Instruction is, therefore, pleased to make this guidebook available to the schools of Iowa.

This publication is designed to illustrate how information about the effects of smoking can be incorporated into virtually all grade levels and curriculum areas. It is, therefore, hoped that the handbook will stimulate all districts to develop a planned student information program which will integrate specifically with each local school curriculum.

PAUL F. JOHNSTON
State Superintendent of Public Instruction

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We thank these persons and organizations for allowing us to adapt this publication to fit the needs of Iowa schools in their endeavors to better teach this very important topic.

Smokey Bear materials appearing throughout this publication are placed there for the sole purpose of increasing public information regarding forest fire prevention. However, this does not preclude the drawing of concomitant implications from their usage.

. . . .

Appreciation is expressed also to the following individuals who aided in the development of the publication:

Fay S. Cleary, Consultant, School Health Services, Department of Public Instruction, Des Moines.

Dudley D. Draxton, Coordinator of Health Education and Physical Education, Cedar Rapids Community Schools, Cedar Rapids.

Ramon N. Fisher, Elementary Coordinator, Humboldt Community Schools, Humboldt.

Anne Meredith Johnson, Formerly Director of Information and Education, State Health Department.

Mrs. Hazel Lammey, Associated Health Organizations of Iowa, Des Moines.

Mary K. Radcliffe, Director, Information-Education, Iowa TB-Respiratory Disease Association, Des Moines.

Harold Rathert, Supervisor of Science, Des Moines Public Schools, Des Moines.

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BASIC FACTS
RELATED TO CIGARETTE SMOKING AND ITS EFFECT ON HEALTH

The following facts and data are supported by research. Two important sources of information for an elaboration of these facts are 1) *Smoking and Health*, Report of the Advisory Committee to the Surgeon General of the Public Health Service, Public Health Service Publication No. 1103, U. S. Government Printing Office, Washington, D.C. 20402; and 2) *Smoking Facts You Should Know*, American Medical Association, 535 N. Dearborn Street, Chicago, Illinois 60610 (see Bibliography for complete list of resources).

- Cigarette smokers experience higher mortality and morbidity rates at almost all ages.
- An estimated two million teens begin smoking cigarettes each year (4,500 each day).
- Studies vary as to the percentage of students who smoke cigarettes, but nationally about one out of every three students smokes from junior high grades on.
- A "one-pack-a-day" cigarette smoker spends about $150 a year on cigarettes ($3 per week). Americans spend more than seven billion dollars yearly on tobacco products.
- Teens who do not smoke or who give up smoking reduce their chances of getting cancer, heart disease, and other chronic respiratory diseases such as emphysema and bronchitis.
- It is estimated that a 20-year-old male cigarette smoker loses about five years of his total life expectancy from smoking.
- Smoking results in the development of a strong, very difficult to break habit. Some authorities consider it an addiction in some people.
- Many countries (including England, Norway, Italy, Sweden, Holland, Canada, and Australia) have issued government warnings against cigarette smoking, and they have developed educational programs aimed at curtailing smoking among teens and adults. Iceland has placed a tax on cigarettes to be used for research and education on smoking and health.
- The tobacco industry refutes the claims of a causal relationship between smoking and health, but has not been able to disprove present research findings.
- Cigarette advertising can be misleading with regard to taste and the benefits to be derived from smoking.
- Teens smoke cigarettes for such reasons as acceptance by the group, defiance of authority, "something to do," a symbol of maturity, or a social crutch. Teens with a variety of social and academic problems tend to smoke more than teens who do not have these problems. It is interesting to note that very few honor students smoke; more often, smoking is associated with the lower portion of the academic scale and drop-outs.

- The psychological factors in cigarette smoking are many and complex and are very difficult to combat.
- Smoking decreases lung function and increases breathlessness.
- Cigarette smokers suffer more from acute and chronic respiratory disease problems than do non-smokers.
- Smoking reduces athletic ability. It also reduces reaction time and endurance. Most athletes do not smoke.
- Women smokers have more premature and stillbirths than do non-smoking women.
- Smoking increases heart rate and blood pressure. In most persons, smoking 1 to 2 cigarettes causes a brief increase of 15 to 25 beats per minute in their resting heart rate. There is a rise in systolic and diastolic blood pressure.
- Smoking dulls taste buds and depresses appetite.
- Smoking stimulates the autonomic nervous system. The effects of smoking are related to Buerger's disease, a constriction of the small arteries in the hands and feet that can lead to gangrene and necessitate amputation.
- Coronary heart disease occurs more frequently in cigarette smokers than among non-smokers. The nicotine is the culprit; it can be absorbed through the lining of the mouth and nose, not just the lungs.
- Cigarette smokers experience peptic ulcers more frequently than do non-smokers.
- Some persons have forms of tobacco allergy.
- A form of blindness called tobacco amblyophia can also be contracted through smoking.
- Cigarette smoke contains "tars" which can produce cancer in experimental animals.
- Smoke "tars" inhaled over a long period of time damage the cilial lining of the bronchi and the basal cells below. Such damage is frequently the precursor of cancer.
- Other damage is caused when nicotine stimulates contraction of the muscles of the bronchi, narrowing them and reducing air flow. The lining of the bronchial walls is also thickened.
- There are other poisons contained in tobacco that are harmful to the body. Significant amounts of arsenic, formaldehyde, hydrocarbons, ammonia, benzedrine, and DDT.
- About 50% of inhaled smoke remains in the lungs.
- A smoker who inhales usually receives from 1 to 2 milligrams of nicotine from a single cigarette. (400 milligrams will kill a man as quickly as a bullet; 50-60 milligrams cause paralyzation of respiratory organs.)

- Filters do not remove all of the "tars." Despite advertising implications, no cigarette is free of "tars" and nicotine. Several reasons are 1) stronger, cheaper tobacco penetrates through filters; 2) loosely packed filters; 3) smokers smoke the entire cigarette, which contains concentrated forms of the "tars" near the butt.

- By the time symptoms of lung cancer appear (chronic cough, blood in sputum, pain in chest), the disease is far advanced. Chances of curing lung cancer are one in twenty.

- Lung cancer rates have increased by a factor of ten in the past thirty years. Lung cancer now kills over 47,000 Americans a year.

- Significant damage is done by the carbon monoxide in smoke. It is quickly picked up by the hemoglobin in the blood, blocking the oxygen-carrying function of hemoglobin.

- Research on the health effects of cigarette smoking is thought to be conclusive enough by several national life insurance companies that they have taken note and come out with reduced rates. One company reduced its rate 5% for the non-smoker.

- Cigarette smoking also affects the membrane lining of the larynx or "voice box." Smoking causes thicker, swollen vocal cords. There is a definite increase in laryngeal cancer cases.

- Cancer is related directly to consumption of tobacco. At one-half pack a day, a smoker's chances for cancer are 7 times greater than for a non-smoker. At two packs a day, his death chances increase to 20 times greater than for non-smokers.

- The heat from the smoke of a cigarette is 835 ° C or 1535 ° F at rest: 884 ° C or 1623 ° F when air is drawn through it. This heat contributes to the paralysis of the cilia in the bronchi.

- Lung cancer and emphysema are appearing increasingly in smokers in their forties, apparently due to their having started smoking at an earlier age.

- Of all U. S. forest fires in 1966, 42% were man made. Nineteen million acres of timber were destroyed.

OBJECTIVES AND SPEAKING VOCABULARY FOR
PRIMARY UNIT

TEACHER OBJECTIVES

1. To help students develop a desire to stay well and have strong, healthy, useful bodies.

2. To help children relate their own health to current social problems, including smoking.

3. To begin the development in young children of an awareness of the hazards and the disadvantages of cigarette smoking, so that in the future they may formulate firmly and realistically a personal decision on whether to smoke or not to smoke.

4. To encourage students to present findings regarding cigarette smoking to others–parents and friends.

5. To accept responsibility for one's own behavior with regard to smoking.

6. To understand why people smoke.

7. To become acquainted with facts about the effects of cigarette smoking on health.

8. To become acquainted and keep abreast of current research findings amd materials made readily available on the topic of cigarette smoking.

9. To develop and reflect an objective and non-moralizing approach to this topic, using attractive materials and techniques.

STUDENT OBJECTIVES

1. To accept personal responsibility for improving and safeguarding one's own health. Realization of this is essential for effective, productive life.

2. To become familiar with current data about smoking and its effect on health.

3. To consider the variety of reasons for and against smoking, realizing that some people smoke 1) not knowing the harm that cigarettes cause or 2) disregarding the warnings.

4. To learn to analyze advertising and to realize the purposes of it.

5. To understand that smoking is a habit.

6. To begin to accept responsibility for making a personal decision.

7. To appreciate and understand smoking information and be willing to share it with parents and others.

SPEAKING VOCABULARY

air pollution
ammonia
arsenic
bronchi
bronchitis
cancer
carbon dioxide
chest
chronic
cigar
cigarette
cilia
combustible
commercials
cough
disease
emphysema
exhale
filter
habit
heart
inhale
lungs
nicotine
oxygen
poison
smog
smoke
statistics
survey
tar
tobacco
trachea
x-ray

KINDERGARTEN UNIT

Because of the structure of the kindergarten "day," the teacher must seize upon the teachable moments. These learnings must be related and referred to time and again. It is necessary to help children formulate ideas about smoking by showing them pictures, asking questions and developing discussions to help them find answers to pertinent facts. They need many sensory experiences. Thus, pertinent facts learned about smoking will aid them to make a choice in later years.

It is not intended that these suggested activities be used as teaching units. Rather, it is hoped that they will help in teaching the broad range of effects smoking has on one's health, and that teachers will not select from these activities alone, but will add their own innovations and utilize other resources as they become available.

Learning activities and suggestions that may be correlated with the daily program:

I. ART

A. Mural about Smokey the Bear

B. Draw or paint pictures of forests before and after fires

C. Draw or paint pictures of smokers–how they look

D. Color sheets on Smokey the Bear (Appendix, pages 62-69)

E. Make and stuff a life-like Smokey

F. Make a "Do" and "Don't" Chart

G. Make litter bags

H. Paint "road signs"--such as "Prevent Forest Fires" or "Don't Smoke"

I. Make cartoons--did you ever see a dog smoking?

J. Draw or paint pictures showing good behavioral health habits

K. Make puppets out of bags, perhaps of Smokey the Bear

L. Create eye-catching bulletin boards–use posters or creative pictures

II. HEALTH

A. Fire safety
   1. Role of fireman
   2. Role of forest ranger
   3. Playing with matches and cigarette lighters–reasons
   4. Have Fire Prevention Week activities in October

B. Our body
   1. Use the senses, e.g., unpleasant breath, stained teeth, smelly clothes, stale smell in home; imitate smoke being blown in one's face; annoyance of a chronic cough
   2. Show posters, pictures, or models of infected lungs.
   3. Measure and weigh children--stress that smoking dulls taste buds, thus curbs appetite–so smoking could harm health

C. Habits
   1. Discuss what a habit is--difficulty of breaking a smoking habit
   2. Compare good and detrimental habits–learn good health habits from pets
      a. Raccoons wash face
      b. No animals smoke
      c. Mother animals wash their young

      d. Pets need food and rest
   3. Habits can be broken
      a. Sucking the thumb
      b. Biting nails
      c. The baby blanket
      d. Cigarette smoking

III. LANGUAGE ARTS

Correlate at own discretion in above subject areas.

A. Sharing experiences (Show and Tell)

B. Observation of other grades' projects--listen to reports, etc.

C. Dictated stories--

D. Dramatization (role playing)
   1. Mother sweeping ashes from the floor
   2. Father coughing after a smoke
   3. Cleaning up ashes, yards
   4. Reporting a fire over the telephone
   5. Doctor checking a bear (Smokey) after a fire
   6. Anything that involves taste or smell

E. Enact playlet "Smokey and the Careless Camper" (Appendix, page 91)

F. Finger play "Buffy and Fluffy Save the Day" (Appendix, page 90)--learn or use as story plan

G. Read "Smokey the Bear" and "Bambi" (Appendix, page 135)

H. Field trip to the fire station

I. Use resource people
   1. Schedule a fireman to talk to class.
   2. Doctor (could be a parent)

J. Create a filmstrip or story play

K. Improvise own script for puppets

L. Participate in school parade or in school programs using props prepared in classroom--puppets created to illustrate lessons learned from smoking information.

M. Debunk TV commercials geared to five-year-old's connotation–analyze what the commercial tells (interesting insight into what children really understand from what they see--one child thought he'd want to smoke because he'd get a horse as portrayed by the ad)

N. Work out smoking jigsaw puzzles (Appendix, pages 72, 73)

O. Create own puzzles from material presented in classroom

P. See film on bears

Q. Show films "Smokey the Bear" or "Smokey" (Appendix, page 137)

IV. MATHEMATICS

A. Work number puzzle sheet (Appendix, page 67)

B. Count to 20–draw 20 cigarettes

C. Count the number of parents that smoke

D. Count the number of parents who do not smoke

E. Create number sheets--counting objects that are objectionable--include cigarettes, cigars, pipes

V. MUSIC

A. Learn "Smokey the Bear."

B. Learn songs about the fireman, doctor, etc.

VI. PHYSICAL EDUCATION

A. Mimetics–"Buffy and Fluffy Save the Day" (Appendix, page 90)

B. Creative rhythmic activities
   1. A race in which the loser is a cigarette smoker
   2. Vacuuming the rug–to clean up the ashes
   3. Sweeping the floor
   4. Washing the ashtrays
   5. Animals fleeing a raging fire
   6. Trees swaying (caused by a careless smoker who burned up a forest)

C. Dramatize rhythm record about firemen

D. Games
   1. Squirrels in the Trees (Appendix, page 80)
   2. Firemen (Appendix, page 79)

VII. SCIENCE

A. Conservation
   1. Beauty of forests–effect of litter-bugs, cigarette throwers, etc.
   2. Protection of animals
      a. Forest friends
      b. Circus animals
   3. Preservation of trees and plants
   4. Conservation of home
      a. Yards
      b. Furniture–smoking burns
      c. Floors–burns and ashes
      d. Upholstery–burns
      e. Cars–holes

B. Air pollution
   1. Properties of air
   2. Smog–compare with smoke in lungs–50% of smoke remains in lungs

VIII. SOCIAL STUDIES

A. Family living
   1. Role playing in play house center–dirty ash trays, etc.
   2. Class discussions, e.g., why parents and/or friends like to smoke. It is necessary to teach fact that we love people but may not necessarily like what they do. Examples can be used to stimulate discussions on why people like us and what we do that people like–hence, establishing behavioral attitudes and patterns.
   3. Read "Freckle-Face Jimmy and the Dragon" (Appendix, page 135) to the children. This booklet shows what mimicking can lead to.

B. People who help us
   1. Doctor
   2. Nurse
   3. Forest ranger
   4. Fireman
   5. Researchers
   6. Reporters

C. Transportation
   1. Fire hazards on planes, buses, etc.
   2. Effect of smoking on passengers

FIRST GRADE UNIT

I. ART

A. Murals
  1. Community dangers
  2. Smoking dangers
  3. Rewards for non-smoking

B. Posters, individual or composite
  1. To enter room contest
  2. Intra-school or intra-grade contest
  3. On various anti-smoking subjects

C. Puppets–individual or room mascot

D. Masks depicting "tar," nicotine, ammonia, and arsenic

E. Dioramas

F. Moving picture
  1. Similar scenes as murals
  2. Depict stories or movie scenes

G. Class "fold-up" notebook with dictated or original captions

H. Charts
  1. Results of surveys
  2. Copies from information seen
  3. Discuss what charts mean

I. Bulletin board displays using captions or slogans
  1. Teacher initiated
  2. Pupil inspired

J. What is good? and What is bad? Posters

K. Cartoon pictures–e.g., does a dog smoke?

L. Make "road signs"
  1. "Prevent forest fires"
  2. "Don't start!"
  3. "Why smoke?"

  Pretend these were seen along the road, discuss the purpose of a road sign

II. LANGUAGE ARTS

A. Have resource people talk to the first grade (e.g., firemen, doctors, nurses, forest rangers)

B. Creative playlets or play dealing with some aspect of smoking (Appendix, page 86-94)

C. Experience charts–write about results of talks, experiences with puppets, things learned from resource people

D. Cooperative charts

E. Individual or dictated stories can be created by children about smoking dangers and habits

F. Prepare a questionnaire–ask parents and friends about smoking habits

G. Chart results of survey or research from TV or home discussions

H. Jingles, slogans
  1. "No if's, no maybe's, no butts!"
  2. "Don't let your health go up in smoke"

I. Role playing--choose a particular person
  1. Be ____________, an athlete who doesn't smoke
  2. Be one of the last five presidents, all of whom do not smoke. Tell why they don't smoke.

J. Dramatization-e.g., a doctor checking heart beat; listening to someone breathe; asking leading questions about smoking; firemen putting out fires

K. Hand puppets

L. Pantomimes
  1. Father coughing--could have children guess what is happening

    2. Mother cleaning

M. Observation of other grades' activities which could lead to a motivation for class discussion

N. Make tapes of the roles children enacted

O. Participate in school parade using props made by children

P. Phonics exercises
    1. Words that rhyme using terms found in this unit
    2. Words that begin alike
    3. Words that end the same
    4. Words that have the same vowel sounds

Q. Exercises on things that go together
    1. Plant and cigarette
    2. Cigarette and someone coughing
    3. X-ray machine and someone holding chest
    4. Smoke and cancer
    5. Doctor and patients

R. Do worksheets (Appendix, pages 74-78)

S. Crossword puzzles (Appendix, pages 95, 96)

III. MATHEMATICS

A. Statistics about how fires are caused by cigarettes--perhaps even forest fires

B. Cost of cigarettes--*more or less than* concept (Example: does a cigarette cost more or less than a bar of candy)

C. Draw cigarettes using measurement techniques. (Example: draw a cigarette 4 inches long. Color half of it black)

D. Count cigarettes in a pack (1-20). How many in ½ pack? 2 packs?

IV. MUSIC AND PHYSICAL EDUCATION

A. Make up smoking songs to familiar tunes, such as "Are You Sleeping?" or "On Top of Old Smokey"

B. Play "Firemen" game (Appendix, page 79)

C. Rhythms

D. Listen to record, "Smokey the Bear"

E. Teach songs: "Smokey, the Ranger's Friend," and "Smokey, Put Your Nose In the Breeze" (Appendix, pages 81-84)

F. Learn Poem "Buffy and Fluffy Save the Day" (Appendix, page 90)

G. Learn smoking version of song "Old McDonald" (Appendix, page 85)

H. Jump rope or skip to record of "Old McDonald" and "Smokey the Bear"

V. SCIENCE AND HEALTH

A. Safety hazards
    1. Home
        a. Make a list of safety rules, emphasize smokers' carelessness. Stress not playing with matches or cigarettes and cigarette lighters.
        b. Make a chart or experience story on health text chapter, "The Safe Way for You." Dramatization would fit in nicely.
        c. What do you do when you are alone?
            1) Discussion
            2) A good place to see the filmstrip "Get Smart! Don't Start!" (Appendix, page 138)
    2. Community dangers
        a. Fires on buses, airplanes, circuses (safety of animals), fairs, and farms
        b. Forest fires--correlate with Fire Prevention Week, which

usually comes in October

1) Conservation of plants, animals, etc.
2) Why no hunting is allowed at certain times
3) See films–"Smokey the Bear" and "Smokey"
4) Obtain literature from Forest Service–posters, pictures, book marks, booklets
5) Read Golden Books, "Smokey the Bear" and "Bambi" (Appendix, page 135)
6) Paint a mural
7) Color Smokey the Bear activity sheets (Appendix, pages 65-68)

B. How you grow

1. Good health habits
   a. Discuss term "habit"–relate to smoking. Smoking can be stopped, even the smoking habit. Cancer can be prevented if the habit stops in time.
   b. Group discussion about family health habits–some habits are good, some are bad. The mental, emotional, and social health habits can be better understood by bringing in research facts and relating them to family life
2. What helps us grow (good or bad)
   a. Smoking decreases appetite–could we eat right then?
   b. Smoking reduces endurance, causes breathlessness, and slows reaction time. Would runners or swimmers smoke if they want to do well?
      1) Show posters of famous people who do not smoke
      2) Make a comparison chart
   c. Measure and weigh children
3. Bring in facts about "tar" and nicotine and their effect on our lungs
4. Instruct also regarding facts and effects of smoking on the various systems of the body
5. Sponge paint the lungs. Show pictures. Healthy lungs may be compared with diseased ones
6. Observe a smoking machine on goldfish and insects (Appendix, page 123)
7. Show experiment using smoking machine on goldfish and insects (Appendix, page 128)
8. Stress physical examinations--also, introduce concepts of diseases such as tuberculosis, cancer, bronchitis. Show how x-rays can help detect the disease and also help cure early stages of cancer.

C. We learn with our senses

1. Facts about "tar" on our teeth and hands
2. Facts about coughing and bronchitis
3. Smell on clothes, breath, and hands, and in homes and cars
4. Unsightly cigarette ash trays–especially cigar butts
5. Ashes from pipe on floor
6. Air pollution, what it is, how it is formed, and what are its causes
7. Irritation caused by smoke

VI. SOCIAL STUDIES

A. Your and your family

1. Discuss smoking problem–use empathy. Do not condemn–be fair–try to understand. Have children ask parents when they began to smoke. Why?
2. Everyone needs to follow rules
   a. Illustrate some rules parents follow--such as traffic laws and safety rules
   b. Families have rules. What are they? Why should we consider them? How do they contribute to family welfare? (rules about playing with matches,

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for example)
3. Read and discuss Freckle-Face Jimmy and the Dragon (Appendix, page 135)

B. Fireman
1. Fire captain could visit class with safety ideas for first graders
2. Follow-up activities
   a. Individual stories, experience stories, chart of rules
   b. Make a diorama
   c. Make puppets with the children taking turns as narrators

SECOND GRADE UNIT

I. ART

A. Group mural
  1. What happens to smokers
  2. Fire safety hints
  3. A Martian's view of earth people smoking
  4. Why not smoke?
  5. Silly smokers

B. Posters
  1. Harmful effects of smoking
  2. Why not smoke?
  3. Fire safety posters (smokers' carelessness)
  4. How to keep good health
  5. Warnings to others–display them effectively on bulletin boards

C. Diorama

D. Draw cartoons about smoking

E. Lung pictures–simple diagrams showing trachea, bronchi, and lungs. Show clean and damaged lungs with black crayon.

F. Construct a display of anti-smoking theme for hall or showcase, library, or PTA

G. Create neat, attractive, eye-catching bulletin boards that may ask questions such as "Why Smoke?" or "How Do We Look?"

H. Make jig-saw puzzles from Safety Posters--glue on tagboard; cut into pieces

I. Make simple mosaic pictures of fire scenes; safety signs; etc. Use scrap paper, tissue paper, scraps, or rice, beans, rocks, etc.

II. HEALTH

A. Fire safety–"Fire Prevention Week" in October
  1. Do not play with fire, matches, or cigarette lighters
  2. Discuss the effects of smoke inhalation (such as firemen, smokers, and city dwellers face)
  3. Story "Smokey the Bear" (Appendix, page 135)
  4. Film "Smokey" (Appendix, page 137)
  5. Golden Books: "The True Story of Smokey the Bear" (Appendix, page 135)

B. Physical care
  1. Smoke causes stains on hands and teeth--correlate under care of body and cleanliness--appeal to neat, clean appearance
  2. "Happiness is good looks" slogan
  3. Smoke causes odors on clothes and breath
  4. We want to be clean, look clean, smell clean
  5. Disease prevention
    a. Importance of building body resistance with enough sleep, fresh air, proper food, and exercise (relationship to lung cancer, heart disease, and respiratory diseases)
    b. Chart–make a chart of chest area. Identify lungs, trachea, bronchi; make the drawings simple; use board with colored chalk
    c. Use opaque projector to show pictures
    d. Discuss "cough"

6. Nutrition
    a. Effects of smoking on appetite and digestive system
        1) Things we put in our mouth--could they be bad? What are they? Discuss.
        2) Find pictures of things we put in mouth; group them on a chart or in a booklet--"good" or "bad"
        3) Write a story on care of mouth and throat
    b. Need for adequate diet

C. Mental health
    1. Consider "habit"–discuss the meaning of the word; good habits and bad habits
    2. Consider "mistakes" children have made, and what they have learned from them–list some to avoid
        a. Examples: leaving bike in driveway, leaving ice cream out of freezer, leaving crayons near a heater, getting soap in eyes; did they ever try smoking?
        b. We all make mistakes–teacher could tell some she has made

D. What families do together
    1. How they need to be helpful and considerate of one another (e.g. not blowing smoke in face, or making mess with cigarettes and ashes; never smoke in bed)
    2. How we need to help our whole family stay well
    3. Read "Freckle-Face Jimmy and the Dragon" (Appendix, page 135)

E. Show pictures of athletes; discuss "athletics," "physical fitness," "body growth," "need for exercise." How do you think these people stay physically fit?

F. Some exposure to names and effects of respiratory diseases–explain words such as cancer, tuberculosis, emphysema, ulcer, bronchitis, and heart disease

III. LANGUAGE ARTS

A. Dramatize
    1. Typical TV commercial showing glamorous aspects of smoking–STOP, analyze fallacies and erroneous ideas displayed, to help children recognize them as such
    2. Use puppets to dramatize some aspect of smoking education (an old TV cabinet makes a good stage)
    3. Dramatize or pantomime "How a smoker looked and acted that I saw"
    4. Act out "At a grown-ups' party"
    5. Act as a chain smoker would act
    6. Act as if someone were trying to break the habit
    7. Dramatize "Getting smoke in your eyes, or burning fingers"
    8. Dramatize a telephone call to the fire department, using good telephone manners

B. Share and Tell
    1. Share attitudes you have about smoking–encourage freedom of speech and freedom of individual choice
    2. Discussion questions and ideas
        a. How do you think it feels?
        b How do you think it looks?
        c. How do you like its smell?
        d. How do you think smoke tastes?
        e. Do you like to be around people who smoke?
        f. Discuss the harmful effects of cigarettes
        g. Do our families smoke? Why?
        h. Read news articles about smoking, then post on bulletin board

C. Creative writing (independent and group efforts)

Marginal legibility of this page is due to poor original material. Better copy is not available at the time of filming. E.D.R.S.

1. Poems
2. Riddles
3. Limericks
4. Stories
    a. How cigarette smoking harms us
    b. What is wrong with a cigarette?
    c. Cost of smoking (money, risks)
    d. What is a cigarette?
    e. What I would do with a pack of cigarettes
    f. Cancer is no fun
    g. Why I will smoke (or will not) when I grow up

D. Letter writing
1. "Thank you letters" to resource people who have been guests of the group, showing appreciation for specific facts presented to them (e.g., hospital field trip, fireman)
2. To Smokey the Bear, to become a Junior Forest Ranger. A membership card will be sent. Smokey Bear Headquarters, Washington, D.C. 20025
3. Open letter to students–encourage students not to start smoking; "It's not as smart as you think"--sign it, "Your fairy godmother." Cite facts within of harmful effects of smoking.
4. Possible open letter to parents--consider facts about smoking and show how continued smoking can do irreparable harm to families who are left behind, victims of smoking

E. Conversations
1. Telephone conversations for help
    a. How to call a fireman in case of fire
    b. How to call the doctor and tell him symptoms of respiratory disease
2. Discussions of freedom to believe and speak independently
    a. Smokers have right to smoke
    b. How to talk to smokers without making them feel angry
    c. How students can urge people to stop smoking (wise ways of using facts)
3. Have you known any people who quit smoking? How do they feel now? What do they say about smoking?
4. Have you known any people who have died of respiratory or heart disease?

F. Questionnaire--make a group list of questions about aspects of smoking, then find answers to them

G. Teachers could make riddles using various words from the vocabulary list--children then read the riddles and guess:

1. I am white.
   I am little.
   I have tobacco
   In my middle.
   I am not good for you!
   What am I?
2. I am a plant.
   I have pretty flowers,
   But my leaves are harmful.
   They are used to make cigarettes.
   What is my name?

H. Oral quiz--can be used as an introductory activity to gain facts and to ascertain what attitudes and knowledge children have about smoking

I. Phonics exercises
1. SMOKE (sm blend)–how many sm words can you think of?
2. Find rhyming words for these:
   habit
   smoke
   cigarette
   heart
   filter
   smog
   lung
   cough
   disease
   poison
   inhale
   "tar"
   cancer
3. See numerous worksheets (Appendix, pages 74-78)

J. Find descriptive words that tell about smoking (e.g., bitter, smelly, costly, harmful)

K. Crossword puzzles (Appendix, pages 95-117)

L. Alphabetize vocabulary lists and Smokey's Fire A-B-C's (Appendix,pages 65, 75)

M. Make "vocabulary chart" of smoking vocabulary words as they come into use

N. Make secret code messages using facts or concepts for them to decode (Appendix, page 100)

IV. MATHEMATICS

A. Cost of smoking
   1. A pack costs about 40c
   2. A carton costs about $3.50
   3. About $150 per year to smoke

B. What could I buy with $150?
   1. Three bikes
   2. 3,000 candy bars at 5c
   3. 1,500 bottles of pop or ice cream cones at 10c

C. Cost of 1 pack
   1. Show money combinations (nickels, dimes, pennies, quarters)
   2. Make change from 50c, $1.00, $5.00

D. Show statistics on 0 - 100 number line
   1. 94 out of 100 lung cancers are caused by smoking
   2. Show greater than or less than
      a. Cost of 1 pack is greater or less than 50c
      b. Cost of 1 pack is greater or less than 20c
      c. Cost of 1 pack is greater or less than $1.00
      d. Cost of 1 carton is greater or less than $1.00
      e. Cost of 1 carton is greater or less than $5.00

E. Make up story problems utilizing greater or less than concepts; money concepts; addition and subtraction; measurement

V. MUSIC

A. Put poem to music–write "no smoking" song

B. Write new words to "Smoke, smoke, smoke that cigarette"

C. Rhythms: inhale, exhale to music (briefly)

D. Learn "Smokey the Bear" song–see film as motivation

VI. SCIENCE

A. Correlate with "Water and Air" and "Heat" units from science text
   1. Temperature of cigarette smoke is very hot
   2. Air pollution is caused by factories, fires, autos, etc.–smog

B. Experiments that can be performed:
   1. Use and evaluate smoking machine in room–use senses of sight, smell, taste (Appendix, page 123)
   2. Make a tobacco insecticide by soaking contents of 3 cigarettes in a pint of water--spray on insects–write out results
   3. Make a tissue paper smoke collection with the smoking machine
   4. Show: gas changed to a liquid (gases contained in tobacco smoke will change to liquids or solids in lungs of smokers)
   5. Raise a tobacco plant–seeds are available through seed stores and by mail order
      a. Note that it is an attractive plant with bloom
      b. Study how it is processed–see encyclopedias
      c. Check activity sheet on tobacco plant (Appendix, page 104)

C. Other activities
  1. Show pictures or sketches of tobacco plants or other interesting pictures pertaining to the tobacco industry
  2. Discuss "What is a cigarette? What is a cigar?"
    a. Take some apart in class–smell, taste
    b. Analyze its composition–tobacco, paper, filter, cotton, charcoal, and water
    c. Note the harmful chemicals in the cigarette
      1) See filmstrip "Get Smart! Don't Start!" (Appendix, page 138)
      2) Make word cards
      3) Learn to recognize the words
  3. Discuss the ineffectiveness of the filter

VII. SOCIAL STUDIES

A. Community helpers
  1. Fireman–his responsibilities and duties; how he helps us; how to get him if the need arises; how firemen have helped the children; show that it is important to get along with others
  2. Forest rangers–his responsibilities and duties
  3. Resource people
    a. Fireman (will bring equipment, truck, and film)–safety aspect
    b. Doctor
    c. Athlete or coach
    d. Nurse
    e. Forest ranger
  4. Field trips
    a. Fire house
    b. Hospital (see chest x-rays, diseased lungs, respiratory equipment)

B. Other activities
  1. Conduct a simple survey of people we are in contact with such as cook, principal, custodian, bus drivers, nurse, secretary, parents, etc. Ask them simple questions such as:
    a. Why do you smoke?
    b. Would you like to stop?
    c. Why don't you smoke?
    d. Did you ever smoke?
  2. Make a chart after discussion of the various reasons that the people gave
  3. Cut out magazine cigarette ads. Observe compare, discuss. What do they say? What do they want us to think? Why do they advertise these bad products? How do these smokers look?
  4. Look at a cigarette package, read the inscription–see caution note
  5. Use map or globe to show where tobacco is grown or where manufacturing plants are (principally in North Carolina); list names of tobacco growing states and find them on a U.S. map
  6. Thanksgiving unit–Indians and Pilgrims: story can be told of beginning of tobacco habit of the Indians, and how they introduced it to white people
  7. Living together–courtesy of ash trays, blowing smoke at others; what should a smoker do? (see Health)
  8. Neighborhood stores
    a. How to buy cigarettes–counter or machine
    b. Cost of cigarettes
    c. Age laws
  9. Safe and harmful neighborhoods–see health-safety aspects
  10. Many ways to learn–how we learn habits such as smoking (see Health)
  11. Messages from far and near: newspapers, radio, T V, advertising, news reporting on health research
  12. Little things grow into big things–neighborhood neatness (not throwing away wrappers, cigarette butts)

VIII. OTHER RELATED ACTIVITIES

A. Observe available filmstrips (Appendix, pages 138, 139)

B. See filmstrip "Get Smart! Don't Start!" (Appendix, page 138)

C. Make a tape recording of famous people–role playing

D. Stage dramatizations; make a filmstrip using 35mm. camera. Write a simple script–it can be easily done.

E. Participate in grade parade–bearing signs and placards the children have made (also masks, Smokey Bear costumes, mock fire fighting equipment, etc.)

THIRD GRADE UNIT

TEACHER OBJECTIVES

1. To help third grade children begin to relate their own health to current social problems, including smoking
2. To help students analyze the advantages and disadvantages of smoking
3. To encourage students to talk to parents and other adults about the things they have learned
4. To encourage students to make a realistic appraisal and a mature judgment about smoking
5. To help children evaluate what they see and hear--to start them thinking

STUDENT OBJECTIVES

1. To have third grade children accept personal responsibility for improving and safeguarding their own health
2. To become familiar with current scientific information about smoking and its effect on health in terms they can understand in the third grade
3. To make use of problem-solving techniques in studying about smoking and its relation to health
4. Find out why people smoke
5. To decide whether the student wants to become a slave to a habit. What is a habit? Can it be good? Can it be bad?
6. To understand why we can't believe everything we see in television advertising
7. To understand that smoking is a personal decision that no one can make for the student
8. The students need to realize that they personally need to help adults know of the dangers of smoking--tactfully, without pushing or preaching--teaching, is the proper method.
9. The third grader can begin to realize that learning about smoking will affect the student's own health attitudes and behavior.
10. To experiment and find out what smoking machines prove and what is contained in the smoke of cigarettes

I. ART

A. Make a mural, either on one topic or as a culmination of a project

B Have illustrated slogans

C. Make a lung with color resistant rubber cement

D. Poster contest--possibly compete with other rooms

E. Homemade TV illustrating a group of lessons or as a culmination of a project

F. Papier-mache heart

G. Creative pictures

II. LANGUAGE ARTS

A. Interviews with smokers and non-smokers on why they do or do not smoke--chart results

B. Creative writing about the prospects of smoking–individual attitudes may be revealed

C. Creative poetry–samples show how it may be developed

D	S	S	Y
O	M	T	O
	O	O	U
N	K	P	
O	I		S
T	N	B	T
	G	E	A
S		F	R
M	I	O	T
O	S	R	
K		E	
E	H		
	A		
	R		
	M		
	F		
	U		
	L		

D. Make reports on tobacco
  1. Why people smoke
  2. How tobacco is grown
  3. Why people sell tobacco
  4. Why people buy tobacco
  5. Why smokers should quit

E. Make reports as a result of interviews on why the children's parents smoke

F. Playlets on smoking
  1. Use hand puppets–put on skit for classroom or for other groups
  2. Pretend to put on TV shows
  3. Creative plays
  4. Word games such as "Password," using words pertaining to smoking
  5. Pantomimes that involve smoking

G. Games
  1. "Password"
  2. Guessing games: put objects on tray--guess by feeling what is on tray; include cigarettes, cigars, and pipes
  3. Charades involving smoking topics, field trips, interviews

H. Experience stories–as a result of hearing resource persons, or other learning experiences

I. Reports on athletes who do not smoke

J. Riddles and limericks

K. Thank you letters to resource people or asking for information

L. Phonics exercises

III. MATHEMATICS

A. Add up cost of 7 packs of cigarettes. Seven davs in one week at one pack a day. What would 2 packs a day cost?

B. At 4 weeks in a month and 7 packs in a week, how many packs do people smoke in a month? In a year?

C. If cigarettes cost 40c per pack, how much would you spend in a week, month, or year?

D. Find objects in advertisement that would compare in price for each division–week, month, year

E. What objects would you like for that amount of money?

F. Graph the heart rate of smokers before, during, and after smoking a cigarette.

IV. MUSIC

A. Be creative--transpose creative poems to familiar tunes

B. Make up a tune and words to go with it

C. Songs (Appendix, pages 81-85)

D. See film "Smokey the Bear" Appendix, page 137)

V. SCIENCE AND HEALTH

A. Safety
  1. Every day--how and why we need to be careful
  2. Fire dangers
    a. Discussions related to cigarette smoking and matches
    b. Suffocation
  3. Fire Prevention Week ideas
    a. Resource person from fire department giving lessons on gas and smoke masks
    b. Smoke damage to lungs
    c. Fire detection--how fire can be investigated as to its origin
    d. Use of canaries for gas detectors
    e. Resource people (Appendix, page 136)

B. Study of plants and animals
  1. Make your own insecticide by soaking three cigarettes in a pint of water; let it set awhile, then spray it on insects to find out the results
  2. A resource person from a chemical company could visit classroom to discuss effects of sprays--especially interesting will be its components of nicotine
  3. In study of plants, analyze a tobacco plant

C. Study of the body
  1. Nose--smoking affects the smelling mechanism; smoking machine (Appendix, page 123) would quickly prove it
  2. Tongue--coated from smoking; food does not taste as good; discuss this with people who have quit smoking
  3. Cells--make up our body; need good air; what we eat or do not eat affects them. Smoking harms them by not bringing good air to them.
  4. Heart--normally beats 70 or more times a minute; in a smoker, this increases from 15 to 25 times more per minute for a brief period
    a. Experiment--take pulse of a smoker before he starts smoking; wait 3 minutes while he smokes and take pulse again; continue until cigarette is consumed. Graph the results.
    b. Discuss how this might harm the body

D. Good health habits--Do's and Don'ts as related to smoking

E. Family living
  1. Working together, doing chores for the good of the family. Are some chores unpleasant? Why do or do you not like to empty ashtrays?
  2. Sisters and brothers at home; we must try to get along. Older sisters and brothers serve as models for younger children. What are some good habits older brothers and sisters might have? What are some habits the younger child would not want to repeat?
  3. How to help our parents or older brothers and sisters learn about the dangers of smoking
    a. Lessons in tact
    b. Taking home completed projects and explain what student learned
    c. Encourage some homework which will involve parents, get

parents to help explain TV commercials to child; possible questionnaire to take home for interview

F. Health habits
   1. Things that children should do--do eat correctly, do not smoke
   2. What may hamper growth? Why? Smoking curbs appetite and affects taste buds
   3. Prevention of diseases
      a. Cigarettes cause diseases such as cancer, emphysema, bronchitis, heart trouble, chronic cough; therefore, wise students will not start smoking
      b. Why do cigarettes cause diseases?
         1) Observe "tars" and smoke from cigarette machines (Appendix, pages 123-127)
         2) Feel heat from cigarette; heat is 1623° F. when inhaled; compare this with boiling water. Explain it paralyzes the "brooms" or cilia of the bronchial walls so that they can't clean out lungs
         3) Filmstrip on "Get Smart! Don't Start!" (Appendix, page 138)

G. Mental health
   1. Attitudes toward others–be considerate, tactful, not judging others, but be helpful at the same time
   2. Attitudes toward self–want to take care of your body to enjoy life; make wise decisions to benefit self and your family

H. Science: solids, liquids, and gases--analyze a cigarette in the three states. Solid–form; liquid–tars; gases–the smoke

VI. SOCIAL STUDIES

A. Community helpers--resource persons to help us understand about the hazards of smoking
   1. Exterminator
   2. Fire detective
   3. Firemen
   4. Doctors and nurses
   5. Physical education instructors

B. Clothing unit
   1. People involved in making material
   2. Reason why some get destroyed--burned holes--repair on clothes and furniture
   3. Protection of clothes and furniture

C. Farmers
   1. What do they raise?
   2. Some crops that do not help man (tobacco)--what could be raised on the same land that would help man?
   3. Analyzing the cigarette plant–value of it

D. Indians
   1. History of the tobacco plant–the Indian first used it
   2. How the Indians used tobacco
   3. How the Indians spread tobacco habit to others
   4. Consider where Indians first got their uses for tobacco

VII. OTHER ACTIVITIES

A. School parade

B. News bulletin board with news ideas on smoking

C. Make a notebook with all items about smoking saved from each subject matter area for the whole year

D. Make a filmstrip about the things learned

E. Watch films pertaining to grade three--"Smoke Anyone" (Appendix, page 137)

F. Observe filmstrip on third grade level (Appendix, page 138), "Get Smart! Don't Start!"

G. Make "Keep Iowa Green" posters

H. Make up crossword puzzles with words about smoking (Appendix, pages 130-133)

I. Put on plays created for other rooms or for parents

J. Make jigsaw puzzles (Appendix, pages 72, 73)

K. "Show and Tell" time to share ideas and thoughts about smoking

L. Class to make up questionnaire to use for interviewing parents, friends and neighbors about their smoking habits

M. Vocabulary chart could be made for work recognition and definition

N. Play games (Appendix, pages 79, 80)
   1. "Fire Engine"
   2. "Forest Lookout"

FOURTH GRADE UNIT

TEACHER OBJECTIVES

1. To promote awareness of dangers of smoking
2. To help fourth grade children relate their own health to current problems, including smoking
3. To help students analyze the advantages and disadvantages of smoking
4. To encourage students to make a realistic appraisal and a mature judgment about smoking

STUDENT OBJECTIVES

1. To accept personal responsibility for improving and safeguarding one's own health
2. To become familiar with current scientific information about smoking and its effect on health
3. To use fourth-grade problem solving techniques in studying about smoking and its relation to health
4. To understand the various reasons why people smoke
5. To use reason concerning advertising and its relation to smoking
6. To realize that to smoke or not to smoke is a personal decision
7. To become concerned about the health problems of others around them
8. To understand how this learning unit on smoking can affect health attitudes and behaviors
9. To be able to prove several scientific facts through demonstrations
10. To appreciate and to assist initiation of education of parents and others in the community on the hazards of continued smoking

I. ART

A. Mural of either one phase of learning about smoking or as a culmination

B. Making drawings, cartoons--e.g., "How people look when they smoke"

C. Poster contest--intra-room or intra-school

D. Making puppets--use with skits on smoking theme

E. Find interesting pictures, create new titles

II. LANGUAGE ARTS

A. Write editorials for room newspaper
   1. Reasons for not smoking
   2. Why people smoke
   3. Why I will or will not smoke

B. Hold interviews with school personnel, parents, friends, and siblings

C. Have questionnaire for finding information about smoking. Have class decide what they want to know and chart results

D. Write essays
   1. What I have learned about smoking
   2. High cost of smoking
   3. Why some people smoke
   4. Will I smoke when I'm an adult?

E. Make up catchy slogans to reveal hazards of smoking

F. General discussions
   1. Be yourself–think for yourself
   2. What we know about the cigarette habit
   3. Analyze advertising and its effects
   4. What's an antidote? Cigarette is a product put into mouth which does not have an antidote printed on package
   5. What is propaganda?
      a. How is it used in getting young folks to smoke?
      b. Why do people employ propaganda?

G. Collect newspaper articles for show and tell

H. Use bulletin boards to illustrate articles, essays, and news items

I. Collect and compare ads; analyze

J. Analyze why some athletes endorse smoking

K. Make up limericks and poems

L. Write experience stories as a group about field trips, films, or filmstrips observed

M. Make use of puppets–write scripts and act out

N. Put on program for parents or other rooms

O. Work out crossword puzzles using smoking words (Appendix, pages 130-133)

P. Dramatize scenes observed in movies, textbooks, or original ideas

III. MATHEMATICS

A. Re-emphasize the cost of smoking for one week, month, and year

B. Find out cost for 10 years, 20 years, 30 years

C. Cost for 1 or 2 smokers in the family for the same period of time

D. See catalogues or ads and see what the family could buy for the same amount of money

E. Make graphs showing relation of smoking and disease-mortality rates

F. Time how long it takes to smoke a cigarette and how many extra heart beats occur after smoking

G. Count out change in buying cigarettes

IV. MUSIC

A. Make up lyrics to familiar melody

B. Make up lyrics and music as a group or individually

C. Listen to "Smokey the Bear" record

V. SCIENCE AND HEALTH

A. Getting along with others
   1. Think for yourself
   2. Don't copy bad habits
   3. Understand why people smoke
   4. Set good example for others

B. Safety and you
   1. Fires in the home–often caused by smoker's carelessness
   2. Forest fires
      a. Fire prevention rules
      b. Destroys property and lives
   3. Visit from fire department or visit a fire station
   4. Safety posters

C. Your skin–bring out that smoking causes lowered skin temperature and stains the fingers

D. Your nose and throat
   1. Smell--good and bad results and their significance
   2. Smoking affects vocal cords–swelling; could get cancer of the throat

E. How you grow–general health
   1. Effects of smoking on the lungs
      a. Observe smoking machine (Appendix,pages 123-129)and record results
      b. See filmstrip "I'll Choose the High Road" (Appendix, page 138)
   2. Effects of smoking on the heart
      a. Analyze what was seen on the filmstrip as to the effects of carbon monoxide on capillaries
      b. Nicotine is harmful because it penetrates mouth lining and affects heart
         1) Heart beats faster
         2) Arteries are constricted or smaller

F. Your muscles
   1. Endurance of muscles is diminished--athletes generally do not smoke
   2. Nervous system is affected–must be calm to make wise decisions

G. Choosing your food and nutrition
   1. Smoking coats the taste buds and food does not taste as good
   2. Lack of taste would affect choice of food--possibly make food too salty or spicy for body's good
   3. Peptic ulcers can be made worse by smoking

H. You and your clothes
   1. Damage from smoking to clothes
   2. Have less money for clothes when smoking
   3. Neatness and smoking--how you look

I. Fighting disease–the body has more endurance when a person doesn't smoke

J. Growing up
   1. Helping yourself make own decisions
   2. Finding reasons for or against smoking
   3. See movie on "Huffless, Puffless Dragon" (Appendix, page 137) for understanding the hazards of smoking as you grow up

K. Projects
   1. Make a smoking machine (Appendix, pages 123-129)
   2. Analyze the chemicals in tobacco (Appendix, page 122)

VI. SOCIAL STUDIES

A. Briefly review the association of smoking with the Indians

B. Analyze how Iowa is affected by money spent on cigarettes

VII. OTHER ACTIVITIES

A. Petend to put on a TV program

B. Make crossword puzzles

C. Play "Hangman's Game" and other games (Appendix, page 80)

FIFTH GRADE UNIT

TEACHER OBJECTIVES

1. To help fifth grade students relate their own health to current social problems, including smoking

2. To promote an interest on the part of students to discover scientific evidence on smoking for themselves

3. To help students analyze the advantages and disadvantages of smoking

4. To help students define the limits of their own educational approach–learn not to judge others; be able to talk to others objectively in order to avoid antagonizing friends or family

5. To encourage students to make a realistic appraisal and a mature judgment about smoking

6. To acquire the ability to evaluate critically facts versus fiction in present day advertising

7. To recognize the economic and political influences on individual judgments in the use of cigarettes

8. To understand the reasons behind and to abide by local, state, and federal laws and ordinances pertaining to cigarette smoking

STUDENT OBJECTIVES

1. An understanding that good health is to be valued and protected

2. An understanding that good health is essential to be an effective and functioning member of society

3. A realization that maintaining good health often depends on indivudual decision

4. An understanding that wise decisions about one's health depend on knowledge of facts and attitudes toward health hazards and that cigarette smoking is a major health hazard

5. An understanding that people smoke cigarettes for various reasons; many smoke without realizing the threat to their health; many are aware of the threat but choose to disregard it.

6. To learn to evaluate the psychology of advertising in relation to smoking

7. To assume responsibility for making public health problems his own concern

8. To develop the skill of demonstrating the effects of smoking, using several scientific proofs or demonstrations

I. ART

A. Posters
   1. Showing areas of the body that smoking may affect
   2. Show what cigarette smoking can do to your body if you were to smoke

3. To illustrate slogans
4. In a smoking contest
5. To illustrate teaching techniques

B. Sketches
1. Smokers in the street
2. Smokers in a restaurant
3. Smokers near a school
4. Smokers in a car
5. Other specific smoking scenes
    a. Analyze stance of smoker
    b. Use empathy and analyze how the smoker must feel

C. Cartoons

D. Make bookmarks on smoking themes

II. HEALTH

A. Mouth and its work
1. Person's appetite is affected–lips, mucous membrane, tongue, gums, esophagus, pharynx are all affected by cigarette smoke and "tars"
    a. Research to locate the part of the cigarette which affects each part of the body
    b. How does the smoking affect each?
2. Teeth
    a. Discoloration–check by observing the teeth of a smoker
    b. New ideas that heat causes damage to teeth might be associated with the very hot gas that enters the mouth; watch for new ideas about this

B. Circulatory system
1. Review effect of nicotine on heart and pulse; arteries
2. Microscope work--study cells and see what effect smoke has on them
3. Also, check paramecium under slide and determine effect of smoke bubbled through water

C. Nervous system
1. It is commonly accepted that smoking unfavorably affects the nervous system
2. Tobacco amblyopia, which is a disturbance of the vision, is occurring in men between 35 and 55 years of age

D. Respiratory system
1. Make a filter and watch how it works–analyze a cigarette filter; decide whether they are effective. Why not? Why? Why are they so popular? Why are they misleading?
2. Lungs–cilia are paralyzed by heat; can't clean out lungs
3. Tuberculosis, asthma, pneumonia are all aggravated by smoking

III. LANGUAGE ARTS

A. Reports on the following suggested topics
1. How smoking affects a person's appetite
2. Effects of smoking on the heart and blood vessels
    a. Heart beats faster while vessels are constricted
    b. Nicotine passes through the lining of the mouth, so pipe smokers who don't inhale still have harmful effects to the circulatory system
3. Ingredients in tobacco smoke and how they affect each part of the body
4. How tobacco is prepared for use by manufacturer
5. How manufacturers prepare cigarette tobacco for consumer
6. Why federal, state, and local governments are slow to interfere with advertising of tobacco products

B. Research
  1. History of tobacco industry
  2. Opposition to the tobacco industry or smoking by:
    a. King James I
    b. Amarath IV of Turkey
    c. Michael III of Russia
    d. Modern day activities
      1) Maurine Neuberger, "Smoke Screen," (Appendix, page 134)
      2) Rachel Carson, "Silent Spring" (Appendix, page 134)
  3. Analyze and reason why they were opposed and why they were not as effective as they might have been

C. Oral reports
  1. Personal stand on the tobacco issue
  2. Results of experiments performed

D. Dramatization
  1. How to refuse a cigarette in public or private
  2. How people are persuaded to smoke by peers
  3. Dramatize a chain smoker; smoker's cough; someone trying to quit smoking
  4. Puppets or skits for classroom or PTA showing

E. Collect cartoons
  1. Newspaper or magazine cartoons; remove captions and substitute others suggested by students--a clue to student activities
  2. Make captions for pictures in newspapers

F. Surveys--anonymous class survey
  1. How many smoke?
  2. How much?
  3. Where?
  4. When?
  5. Do parents consent?
  6. Analyze, chart results

G. Critical analysis
  1. Advertisements
    a. Which statements are true?
    b. Which statements are misleading?
    c. What sources of information can you find for basis of argument?
    d. What could the government do about misleading advertising?
  2. Claims of statisticians
    a. Was it a proper test?
    b. Was the test done under legitimate conditions?
    c. Are the results valid?
    d. Are the results misleading?
    e. Could the results be different?
  3. The following statements were found in an 1884 hygiene book for students. Analyze them to see whether they are still true. Check why they might be faulty.

    a. "The smoke of paper wrappings is irritating to the lungs, and the cigarettes send more poisonous fumes into the delicate air cells than a pipe or cigar does."
    b. "Old cigar stumps are often picked up from the streets and smoked or made into cigarettes."
    c. "A boy who uses tobacco runs the risk of being dwarfed in body, mind, and soul; -of becoming a nervous, sickly man, with a weak memory, and a feeble heart."
  4. Critically analyze the results of questionnaires and interviews that were conducted with students (smokers and non-smokers) and the public

H. Questionnaires
  1. Smokers
    a. Why do you smoke?

    - b. How did you feel the first time you smoked?
    - c. Why did you continue?
    - d. Would you like to stop? Why?
  - 2. Non-smokers
    - a. Why aren't you smoking?
    - b. Did you ever smoke?
    - c. How did you stop?
    - d. How would you feel differently now if you had smoked before?
    - e. How do you feel about smokers?
  - 3. Chart the results of the questionnaire

I. Write creative stories that deal with what was learned through the smoking unit

J. Creative poetry writing

K. Work out class crossword puzzles (Appendix, pages 95-117)

L. Make a tape recording about what the class has learned. It may be exchanged with other classes on the intra-inter school basis.

M. Locate nicknames of cigarettes

N. Spelling list in notebook

O. Dictionary made of unknown words

P. Keep notebook on all information gathered throughout the year

Q. Write letters requesting information about tobacco from Departments of State of the Southern states

IV. MATHEMATICS

A. Make graphs comparing the average life expectancy of a smoker to that of a non-smoker

B. By means of a graph, show how the rate of lung disease has increased over the last thirty years

C. Obtain graphs that are produced by insurance companies and medical associations and compare them with your own graphs and materials

D. Compute the cost of one pack of cigarettes per day for one year, ten years, twenty years

E. Figure the tax on this

F. Figure what is spent when both parents smoke

G. Compare costs of cigarettes in other states

H. Use fractions to determine what part of the population smokes

I. What part of the population is likely to get lung cancer? Emphysema? Heart trouble?

V. SCIENCE

A. Air pollution and its effect on body defenses, particularly its effect on the lungs

B. Composition of different gases in the air

C. Gases harmful to the body and why (carbon monoxide replaces oxygen in blood cells, causing oxygen starvation to the cells); there is carbon monoxide gas in the smoke from cigarettes

D. Principle of a smoking machine may be used to discover air pressure (Appendix, page 123)

VI. SOCIAL STUDIES

A. History of tobacco
    1. Columbus and his men introduced it to Spain
    2. Success of first colonies dependent on tobacco
    3. Slave trade based on tobacco industry
    4. Success of southern states

B. Modern industry of tobacco
    1. Southern states
    2. Atlantic Coastal states
    3. Economic impact of tobacco industry
        a. Products
        b. Factories
        c. Taxes
        d. Workers
        e. Advertising

C. Make U.S. map–locate and identify areas influenced by the tobacco industry

D. Research for information in encyclopedias, library cards, reference books on smoking

VII. OTHER ACTIVITIES

A. Bulletin boards used many ways
    1. Post news items
    2. Interesting display of substances in tobacco that are harmful to the body
    3. Display of cartoons and posters
    4. Display of interesting editorials written by students

B. Room newspaper with occasional smoking editorial

C. Writing counter-commercials

D. Obtain resource persons
    1. Fire captain of local district may be willing to come and speak to a fifth grade group
    2. Check with local doctors who are interested in effects of smoking to come and speak to the students

E. See films--suggested one for fifth grade, "Time Pulls the Trigger (Appendix, page 138)

F. Display materials from Resource Agencies (Appendix, Pages 135, 136, 140-142, 144) such as posters, booklets, and pamphlets in an interesting manner. Assign reading material from them.

G. Check out books from library on smoking and make book report

H. Games (Appendix, pages 79, 80)

SIXTH GRADE UNIT

TEACHER OBJECTIVES

1. To help sixth grade students relate their own health to current social probjems, including smoking
2. To promote an interest on the part of the students to discover scientific evidence on smoking for themselves; they can analyze the chemical content of tobacco, filters, and the paper
3. To help students analyze the advantages and disadvantages of smoking
4. To help these students define the limits of their own educational approach (learn to be objective and tactful)
5. Evaluate present day advertising in the light of facts
6. To recognize the economic and political influences on individual judgments in the use of cigarettes
7. To understand how the tobacco industry influences local, national, and international economics
8. To understand the reasons behind and to abide by local, state, and federal laws and ordinances pertaining to cigarette smoking
9. To encourage students to make a realistic appraisal and a mature judgment about smoking

STUDENT OBJECTIVES

1. He must understand that good health is to be valued and protected
2. The student should understand that good health is essential to be an effective and functioning member of society
3. The student must decide for himself if and how he maintains his good health
4. He must understand that wise decisions about one's health depend on knowledge of facts and attitudes toward health hazards and that cigarette smoking is a major health hazard.
5. Students should realize that smokers smoke for various reasons; some do not realize the true hazards; others choose to ignore them
6. Students can become aware of the psychology of advertising in relation to smoking
7. A student should be willing to assume responsibility for making public health problems his own concern
8. He needs several scientific proofs to demonstrate the effects of smoking; he should be able to prove his theories

I. ART

- A. Posters
- B. Enter posterama
- C. Make diagrams of body systems--show before and after
- D. Make cartoons

II. HEALTH

- A. Growing in mental health–mental health is closely related to physical health
  1. A person with good mental health is apt to feel good physically
  2. He has energy and knows how to use it
  3. He understands himself
  4. He knows how to make the most of his good points
  5. The students that understand themselves practice good health habits to maintain themselves to the best of their abilities
  6. Good mental health goes hand in hand with maturity and judgment
  7. Therefore, the wise student will make a careful study of the tobacco industry, advertising, tobacco itself and what it does to his body; then, he will be able to make a wise decision to help his body remain at the peak of performance
- B. Safety during fires
  1. Fires spread with incredible speed. Does the student have as fast a reaction time to act if he smokes?
  2. Poisonous gases spread quickly through a burning house
  3. Poisonous gases are also formed in cigarette smoke. What are they?
  4. Smoker carelessness is the chief cause of fires (check the papers for anecdotes on fires and carelessness relative to private and public property)
- C. Food and the body
  1. Food is needed for growth and energy
     - a. A digestive system cannot function efficiently when affected by smoking
     - b. Taste is dulled, appetite decreases if one smokes
  2. Circulatory system
     - a. Chemicals get into the blood, causing the blood vessels to contract
     - b. The heart is stimulated by the nicotine so it beats faster, but it must work harder to make the blood circulate through the body
       - 1) Nicotine passes through the lining of the mouth–so no type of smoking is safe
       - 2) Make a comparison of heart disease victims who smoked in comparison to those who did not smoke
     - c. Carbon monoxide replaces oxygen in hemoglobin, causing a type of cell starvation
     - d. High blood pressure results from the uneven pressures created by smoking
     - e. Increasing the heart beat lowers the ability and performance of a person in athletics
  3. Respiratory system--cigarettes contain chemicals that injure mucous membranes lining the nose, throat, and lungs
     - a. Chronic bronchitis and lung cancer are caused by chemicals in cigarette smoke
     - b. The cilia are destroyed by the terrific heat in the smoke; research to find the heat of smoke in a cigarette–1623° F. when inhaled
     - c. Bodily defenses against colds and sore throats are weakened in smokers

- d. Laryngeal cancer in men is strictly associated with smoking
    - 1) How is it different from lung cancer?
    - 2) Why is it such a terrible disease?
- 4. Nervous system--messages of sensations such as light, sound, touch, pain, heat, and cold are carried over a network of sensory nerves to the spinal cord and the brain; smoking affects these nerves
    - a. In scientific observations, the direct injection of nicotine into the blood has had the same effect on the organs as smoking
    - b. Nicotine affects the nerve ganglia where the nerves and muscles join; the first effect of nicotine is stimulation, quickly followed by an opposite effect; a slower reaction time results. The muscles remain in good condition but nicotine retards nerve impulses from reaching the muscles (Heart, lungs, eyes, etc.)
    - c. Nicotine affects the eyes by causing the pupils to become larger, decreasing eye reflexes for strong light and close vision; a blindness called tobacco amblyopia is directly related to smoking
    - d. Smoking depresses mental activity and reflex responses
        - 1) How would that relate to students who are going to high school or college?
        - 2) A comparison of smokers and non-smokers could be done here; how many smokers are on the honor roll? the swimming team? debate team?
    - e. Smoking gives an attitude of ease and relaxation; reason–blood sugar is temporarily increased and craving for nicotine is temporarily relieved

III. LANGUAGE ARTS

- A. Research
    - 1. Famous persons who died of causes associated with cigarettes
        - a. King George VI of England
        - b. Nat King Cole
        - c. Humphrey Bogart
        - d. Edward R. Murrow
        - e. Walt Disney
    - 2. Famous persons who have survived cancer possibly caused by smoking
        - a. John Wayne
        - b. Arthur Godfrey
        - c. William Gargan–larynx removed
    - 3. Presidents of the present age--
        - a. President Eisenhower-- he quit after his heart attacks
        - b. President Johnson– he smoked his last cigarette on the way to the hospital after a heart attack
        - c. Study habits of Presidents Kennedy, Hoover, and Truman to see how they recognized harmfulness of tobacco

- B. Reports
    - 1. Personal interviews
    - 2. Interviews
        - a. Someone who still smokes–Why?
        - b. Someone who has stopped smoking
        - c. Parents

- C. Television commercials
    - 1. True or false information about smoking
    - 2. Misleading or not when concerned with smoking

- D. Dramatization
    - 1. Use own imagination

2. Saying no to a cigarette
3. A chain smoker
4. A social effect; how non-smokers are affected

E. Poems and limericks, slogans

F. Objective tests of information– learned about tobacco smoking and its effect on body

G. Subjective tests of attitudes and feelings about smoking

H. Themes
  1. Why I will or will not smoke
  2. What I think of smoking
  3. A case against smoking
  4. How this study has been valuable to me
  5. Other appropriate ideas

I. Crossword puzzles (Appendix, pages 95-117)

J. Oral reports to correspond with research on different subject matters pertaining to smoking

K. Collect cartoons, make new captions

L. Make appropriate captions on any pictures

M. Critical analysis
  1. Advertisements
  2. Purpose of tobacco industry
  3. Taxation problem and tobacco
  4. Economics and tobacco industry
  5. Claims of statistics--are they reliable?

IV. MATHEMATICS

A. Convert Centigrade heat of a cigarette to Fahrenheit
  1. 835° C. at rest equals
  2. 884° C. when air is drawn through it equals

B. Graphs and charts
  1. Mortality rates
  2. Comparison of students on honor roll who smoke versus those who do not smoke
  3. Heart disease--smokers versus non-smokers
  4. Results of surveys
  5. Taxes derived from cigarettes

C. Cubic and metric measures

D. Percentage of population who get lung cancer

E. Fractions--how many victims of lung cancer smoke?

F. What percentage of population smoke?

G. Predicted percentage of the population that will or may die of smoking-caused diseases?

H. Use decimals to picture similar statistics

I. Insurance company policies and rates– how does non-smoking affect same policies?

J. Figure out acreage--land used for tobacco growing

V. SCIENCE

A. Under the heading of atoms and molecules:
  1. Two or more elements in chemical combination produce a compound. This is what happens in the process of smoking
  2. Tobacco is harmless in the growing stage, but when it is smoked, changes occur:
    a. Some of the compounds in the leaf remain in the ash
    b. Others change substantially and a whole new series of compounds is formed
    c. When smoke enters the mouth the smoke is a concentrated

aerosol with millions of particles per cu. cm. which represents some 500 compounds

   d. According to the British Royal College of Physicians, 16 of these compounds are carcinogenic
      1) Suggested activity here would be the elementary lesson on chemical makeup of tobacco smoke (Appendix, page 122)
      2) An experiment could be performed that would show the harmful effect on paramecia. Place a drop of solution containing paramecia on a microscope slide. With low power lens, observe movement of these one-celled organisms. Blow smoke from a smoking device (Appendix, pages 123-129) on the preparation and note effects on the paramecia.
      3) Experiment by using a vacuum to create and observe (whole) smoke
      4) Research to find out how these chemicals in tobacco and smoke combine

B. Waves–sound and light
   1. X-ray–roentgen ray discovered by Wilhelm Roentgen, a German professor
      a. Called x-ray because "x" denotes the unknown
      b. Treatment by x-ray used to cure or retard growth of cancer
   2. Fluoroscope–used in direct examination of heart and lungs in action

VI. SOCIAL STUDIES

Tobacco growing in South America, Mexico, Central America, and islands

A. Tobacco is a native plant of America

B. Cuba is famous for its tobacco

C. Next to sugar, tobacco is Cuba's most valuable crop

D. Factories are located in Havana and other Cuban cities

E. Tobacco products were imported from Cuba. Why not now?

F. U.S. buys more raw tobacco because of high import tax on finished products. Does that explain the high price of imported cigars?

G. Paraguay exports tobacco

H. Other South American countries raise tobacco for home use

VII. OTHER ACTIVITIES

A. Using a map of the world, discuss the major areas in the world where tobacco is grown and produced, particularly the South and Central Americas

B. Prepare a bulletin board display showing the substance found in tobacco and the parts of the body that each affects

C. Write a series of 10, 20 or 30 second spot announcements that might be used by local radio and TV stations

D. Do top athletes smoke? Who? Why not?

E. Devise a questionnaire to give to fellow students, to parents, to strangers

F. Call for resource persons

G. Games (Appendix, page
   1. SMOKE instead of Bingo
   2. Hangman's Game

H. Panel discussions
   1. Why young people should not start smoking
   2. What are the hazards of smoking?
   3. What should the government do to educate about smoking?

I. Debate
   1. To smoke or not to smoke
   2. Do commercials help the tobacco industry?

J. Write letters

K. Display pamphlets and periodicals as references for reading material

L. Make jigsaw puzzles out of posters in smoking kit

SEVENTH and EIGHTH GRADES UNIT

TEACHERS' OBJECTIVES

1. To understand some of the reasons why people smoke
2. To become acquainted with the scientific facts about and the effects of cigarette smoking
3. To accept responsibility for one's own behavior with regard to smoking
4. To acquire the ability to evaluate critically facts versus fiction in advertising
5. To recognize the economic, political, and psycho-social influences on individual judgments in the use of cigarettes
6. To understand the reasons for legislation and to abide by local, state and federal laws and ordinances pertaining to cigarette smoking
7. To be able to present the facts on cigarette smoking objectively regardless of personal feelings on the subject or one's own smoking behavior

STUDENTS' OBJECTIVES

1. To understand that good health is to be valued and protected
2. To understand that good health is essential to be an effective and functioning member of society
3. To realize that maintaining good health often depends on individual decisions
4. To gain a knowledge of the scientific facts about the effects of cigarette smoking
5. To understand that people smoke cigarettes for various reasons; many smoke without realizing the threat to their health; and many are aware of the threat but choose to disregard it

I. ART

A. Draw cartoons

B. Draw posters–intra-class and intra-school contests (possible contest–consult Iowa Tuberculosis and Respiratory Disease Association)

C. Bulletin boards to attractively and interestingly display any smoking and health materials

D. Picture graphs based on experiments in other classes

II. FOREIGN LANGUAGE

A. Translate words on posters into foreign language

B. Compose crossword puzzles with words relating to smoking (Appendix. pages 130-133)

C. Find words that rhyme

D. Compose a dialogue on smoking

III. GUIDANCE AND COUNSELING

A. Plan a debate–for and against smoking

B. Discuss articles on teen-age smoking. Why does a teenager smoke?

C. Use booklets and pamphlets for reports–also send to parents

D. Discuss fire hazards in relation to smoking

E. Discuss pros and cons of smoking in the presence of non-smokers

F. Invite a well-known athlete to address assemblies (a coach might offer practical observations)

G. Mental health--
how habits are formed; determine the difference between "habit" and "addiction"; discuss the psychological aspects of smoking

H. The following are excerpts from various publications that can be used to initiate student discussion

1. "Whether the attraction of tobacco is based mainly on a pleasure principle or on its subtle tranquilizing influence, it is wise to remember that for many persons, breaking the habit is a nerve-wracking experience; indeed, it is one that few individuals manage to effect gracefully. *"(Science Looks at Smoking"* by Eric Northrup, Coward-McCann, Inc., 1957)
2. "There is no longer any doubt that cigarette smokers have a higher death rate than non-smokers. New biological studies help to explain how tobacco smoke damages lungs, heart and other body tissues." *Scientific American*, July 1962)
3. "Reduction in general air pollution should reduce the risks of cigarette smoking; but it is necessary for the health of the people in Britain that any measures that are practical and likely to produce a beneficial change in smoking habits shall be taken promptly." *(Smoking and Health, Summary and Report of the Royal College of Physicians of London on Smoking in Relation to Cancer of the Lung and Other Diseases*, 1962)
4. "Many investigators who have tried to produce lung cancer in rodents by exposing them to tobacco smoke have not succeeded in doing so." *(Scientific American*, July 1962)
5. "We know that the number of doctors who smoke has dropped by 60% in the last nine years. It's up to us to tell people that this has happened–and why it's happened." (The *Medical World News*, July 17, from a report by Dr. DeWitt Daughtry of Miami, Florida during a meeting of the American Medical Association)
6. "A study of the smoking habits of 1,357 pregnant women in Lancashire, England showed significant differences in birth weights and prematurity rates among babies born to mothers who smoked cigarettes compared with non-smoking mothers' offspring." The author points out that one-fourteenth of all births were premature but one-quarter of all deaths were among the premature. He concludes that reducing the proportion of newborns in the underweight group would favorably influence infant mortality. *(Medical Bulletin on Tobacco*, Winter 1964-65)

Marginal legibility of this page is due to poor original material. Better copy is not available at the time of filming. E.D.R.S.

I. Suggested films and filmstrips
  1. "To Smoke or Not To Smoke" (Appendix, page 139)
  2. "Who, Me?" (Appendix, 138)
  3. "I'll Choose the High Road" (Appendix, 138)

IV. LANGUAGE ARTS

A. Evaluate newspaper and magazine cigarette advertising for their appeal to the reader

B. Use cigarette ads to determine propaganda and slant

C. Place cigarette advertisements on the bulletin board with short thought-provoking questions placed at random among them. Examples might be:
"Proves What?"
"What's the gimmick?"
"Status symbol?"
"How about telling the whole story?"

D. To demonstrate the effectiveness of advertising and how much of an impression tobacco ads have made, cut the brand names off advertisements and then determine how many pupils can select the correct brand. Do the same with slogans.

E. Write a story or poem on smoking emphasizing the effects of smoking on the body, society, etc.

F. Coordinate writing with work done in other departments in the school

G. Write letters to various resource agencies and companies for information (Appendix, page 144)

H. Write reports from information gathered

I. Write letters to legislators concerning laws on smoking

J. Discuss satire–suggested films:
"Too Tough To Care" and
"Up in Smoke" (Appendix, page 138)
Record: Bob Newhart's
"Button Down Mind"

K. Develop cartoons, slogans, or limericks about smoking

L. Write plays and dramatize

M. Write editorials for the local newspaper

N. Write and record a series of one-minute or less spot announcements about some aspect of smoking

O. As a class, attempt to identify misleading tobacco advertising

P. List detrimental effects of smoking omitted by cigarette manufacturers and advertisers; then prepare radio, newspaper, and television commercials giving the scientific facts on smoking and health and disease (e.g., one given now by the Cancer Society)

Q. Suggest the student council conduct a campaign to disseminate facts on smoking and health (this may be done during home room period or guidance class)

R. Use role-playing in smoking education

V. LIBRARY

A. The library should contain an adequate supply and variety of current books and periodicals on the subject of smoking and its relationship to health and disease

B. The librarian should keep the faculty informed on material available for reference

VI. MUSIC

A. Discuss relationship of smoking and reduced lung capacity

B. Compose satirical jingles from cigarette advertisements

VII. PHYSICAL EDUCATION

A. Discuss how smoking causes shortage of breath

B. Show the advantages of a healthy body and useful habits

C. Emphasize the effect of smoking on development of physical skills in daily class work

D. Should sports establish standards and restrictions about smoking for those participating?

VIII.A. MATHEMATICS, SEVENTH GRADE

A. Conduct a survey to determine the cost of advertising by tobacco companies
   1. Determine how much TV time is used per week on locally-watched stations
   2. From a manager of one of the radio stations get a rough estimate on the cost to tobacco companies for advertising
   3. From magazines, determine the number of pages of color advertisements; get a rough estimate on cost
   4. After obtaining all the above requested information, combine and compare to the amount spent on research for a cure of cancer

B. Use statistical material--per capita consumption, etc.; then compare the cost of smoking to other things

C. Formulate own questionnaire and start survey, beginning in the seventh grade and continuing through the eighth grade; obtain resource person to help with the questionnaires; then tabulate and average scores

D. List the 10 leading tobacco states; figure how much is produced and the money return per acre; compare this with other crops produced in the same area. Do the same with the 10 leading countries in tobacco production

E. Discover the money value of other products derived from the tobacco plant

VIII.B. MATHEMATICS, EIGHTH GRADE

A. Continuation of student survey

B. Construct various graphs (Appendix, pages 118-121)
   1. Line graphs--
      a. Rise in lung cancer deaths
      b. Changes in tobacco uses or usage
      c. Relative death rate from coronary disease
   2. Bar graphs--
      a. Death rate from all causes
      b. Daily cigarette consumption
      c. Former smokers, non-smokers, present smokers
      d. Coronary artery disease
      e. Degree of inhalation
      f. Non-smokers in the city
      g. Lung cancer death rates

C. Consider how the economy of our country is dependent upon the production of tobacco
   1. Stock market
   2. Gross national product
   3. Percentage of gross national product from tobacco industry
   4. Taxes from tobacco sales
   5. Budgets

D. Also consider the adverse effect upon the economy of our country because of the use of tobacco, such as early deaths.

cost of medical research and services, etc.

IX.A. SCIENCE, SEVENTH GRADE

A. A short neighborhood walk to an area where trees and weeds grow will enable students to search for irregular growths and swellings on tree trunks, leaves, and stems of plant; compare this to growth of cancer cells

B. Show the film, "From One Cell," and distinguish between normal and cancerous cells (Appendix, page 137)

C. Induced plant growths can be produced in the laboratory; using a glass rod, a small amount of mixture of 100 parts lanolin to one part indoleacetic acid is applied to the stem of a young tomato plant; results should be apparent in a few hours (enlarged cells cause the plant to bend away from the area of application)

D. Students can examine prepared microscope slides to discover the differences between normal and cancerous cells

E. Boil cigarettes to make an insecticide

F. Determine nicotine content in plants

G. Study conservation and air pollution

H. Observe the effects of smoke on plants–cover two plants with plastic bags; use one as a control. Run a tube in from a smoking machine and watch the effects of smoke on plant growth

IX.B. SCIENCE, EIGHTH GRADE

A. Study of circulatory and respiratory systems

B. Make smoking machine and show tar and nicotine deposits

C. Discuss effect of smoking on the anatomy of the lung

D. Burn tobacco from cigarettes in test tube and note deposits

E. By means of transparencies, show progressive damage to the lungs from cancer

F. Show x-rays of normal, cancerous, and emphysemic lungs for comparison (actual human lungs, if possible)

G. Obtain speakers from various associations: Cancer, Heart, or Tuberculosis, etc. (Appendix, page 136)

H. Obtain a paramecium to show cilia working; from slaughter house obtain trachea and bronchial tubes–apply charcoal and watch cilia sweep it out; action stops when nicotine and tar are applied

I. Show how air gets *trapped* by using lungs from slaughter house

J. Experiment with animals by putting tar or nicotine on their skin or in their water

K. View normal and cancerous tissue slides

L. Conduct a match test: hold a lighted match approximately six inches from the open mouth; without pursing lips, blow it out; stress the fact that patients with advanced emphysema are unable to do this

M. Develop a vocabulary of terms used in reference to smoking and health

N. Discuss the relationship that smoking might have to the five known general causes of cancer:

1. Mechanical--skin irritation (pipe smokers)
2. Chemical--tars, carcinogens, dusts, carbons (smoke in the lungs)
3. Heat--repeated overheating of an area (tongue, lips, bronchi)
4. Prolonged exposure to the sun
5. Exposures to x-ray or radioisotopes

O. As a culminating activity, have pupils write a paper

P. Suggested film: "Beyond Reasonable Doubt" (Appendix, page 137)

X.A. SOCIAL STUDIES, SEVENTH GRADE

A. Collect current public media articles about smoking throughout year; discuss them. Arrange a bulletin board of current newspaper and magazine articles

B. Using a map of the world discuss the major areas in the world where tobacco is grown or produced

C. Note imports and exports of tobacco of various countries. How are their economies related?

D. Study the laws of other countries pertaining to the sale of tobacco

X.B. SOCIAL STUDIES, EIGHTH GRADE

A. Examine articles and advertising concerning tobacco smoking over periods of time in history

B. Note when the first tobacco plant was brought to Europe

C. Find the definition and derivation of the word "nicotine"

D. Discover conflicting beliefs of the first Europeans who used tobacco on the effects of smoking

E. History of the smoking habits of the people; when did cigarettes become popular?

F. When did the dangers of cigarette smoking become publicized? Discover why

G. Report on the laws of the State of Iowa and the local community that pertain the the sale and use of tobacco

H. Use questions for discussion–how the tobacco industry affects the economy of our country. Suggest the following: "Tobacco is a major industry in North Carolina, and if this industry were destroyed, I suspect the total economy of the state would collapse. The result of such a disaster would, for a time, probably be substantially more serious to the people of North Carolina than would the problems generally associated with the use of tobacco. Tobacco is an important commodity to many people and, for personal reasons, they will be reluctant to support the indictment that has been leveled at tobacco." ("How can we change attitudes and actions on smoking?" by Ralph H. Boatman, Ph.D., *Conn. Medicine*, January 1963, 22:16-20)

I. Continue discussion from current event articles

GRADES NINE through TWELVE

The express purpose of this booklet is to help teachers present to students information on smoking and its relationship to physical and mental health so that these students can become better prepared to make a decision regarding whether to smoke or not to smoke.

Although the following teaching suggestions are listed by department, there is some overlapping. Therefore, it is desired that the teacher using this booklet look at all the suggestions and use those which might be implemented into his particular classroom unit.

In addition to using some of the suggestions in this booklet, the teacher should continue to be inventive in introducing the smoking theme wherever and whenever possible, without its introduction being detrimental to a lesson's continuity.

TEACHERS' OBJECTIVES

1. To introduce the subject of smoking either directly or indirectly so that students may advance toward achieving their objectives, stated below.
2. To influence attitudes and behavior concerning cigarette smoking to be consistent with the conclusions drawn from scientific reports on the social, psychological, medical, and economic effects of cigarette smoking

STUDENTS' OBJECTIVES

1. To become aware of certain effects which the smoker sustains: physical, psychological, and social
2. To explore either in writing or verbally, directly or indirectly, certain positive or negative attitudes or feelings the student has about smoking and his choices of behavior concerning smoking

I. ARTS AND CRAFTS

A. Design a cigarette package complete with "The cigarettes in this package may be harmful to your health."

B. Using comic strip characters, or creating characters, have students lay out a finished comic strip of 4 to 10 frames. Use "Smoking is bad" for central theme.

C. Poster contest against smoking
   1. Use judges
   2. Display winning posters before entire student body
   3. Themes
      a. Effects of smoking
      b. Social pressures and influences
      c. "Suckered" by advertising
      d. Cost of smoking

D. Draw the human figure or parts showing cigarettes being used
   1. Face with cigarette in the mouth and the presence of smoke
   2. Hand holding cigarette, pipe, or cigar

E. Analyze magazine and newspaper ads on smoking for proper layout and for psychological approach

F. Design a magazine or newspaper ad for cigarettes

G. Design a matchbook cover

H. Give instruction on bulletin board display
  1. Use "Smoking is harmful" as theme
  2. Have students design display and exhibit them in other classes

I. Request a modern art conception depicting social status symbols of men and women–look for cigarette influences

II. BUSINESS EDUCATION

A. General business
  1. Discussion on costs involved in smoking and the cost of smoking one pack of cigarettes a day for a year (in the unit on budgets)
  2. The cost of diseases caused by smoking, including medical expenses, disability costs, etc.; insurance groups offering a lower rate to non-smokers may be discussed in connection with insurance
  3. Misleading advertising regarding smoking could be incorporated with the unit on advertising
  4. Bulletin boards displaying smoking information could be used in the room

B. Business law
  1. Students can research laws of the state in regard to the use of tobacco, including the use of machines, sale to minors, etc.
  2. Implement a discussion on– "Could cigarette ads be banned from TV? Why or why not? What are the legal implications?"

C. Typewriting
  1. Duplicated copies of material from the kit can be used for manuscript typewriting assignments; this material can also be used for outlining projects; students read material and select the main points for an outline
  2. After students have typed the manuscript, comprehension questions will be asked and students will answer in typing
  3. Timed writings on smoking material can be given throughout the year.
  4. Students can compose letters requesting material on smoking from various sources. Carbon copies of students' letters and answers received may be posted on the bulletin board: in all probability the students will read these before they have an active interest
  5. Start a story on smoking, its harm and effect, with the first person in each row; at the end of one minute pass to the person behind to continue until the entire row has had a turn

D. Office practice
In a unit on office etiquette, discuss smoking in the office, its effect on work and appearance, and the excessive cost of cigarettes

E. Shorthand I and II
  1. Speed dictation on smoking from materials in the kit may be given
  2. Dictate letters ordering smoking information (similar to typewriting assignment)

III. DRAMA

Students may assume the roles of individuals involved in the following situations

A. A fourteen-year-old student has decided to tell his parents (who both smoke cigarettes) and his grandfather (who smokes a pipe) that they should try to stop smoking

B. A gang wants a non-smoker to join them for a smoke or try his first cigarette

C. A home situation where the son or daughter announces to his parents that he/she has begun smoking

D. A parent discovers a son or daughter smoking secretly

E. Disciplinary action being taken by a principal against three students who have been caught smoking on the school premises

F. A boy and a girl on a date–the boy is attempting to dissuade the girl from smoking (reverse the roles)

G. The basketball coach catches his star player smoking

IV. FOREIGN LANGUAGE

A. Students could be assigned to write letters of inquiry to the foreign embassies in the native language asking for posters and literature on the smoking theme

B. In making and translating sentences, directly or indirectly allude to the smoking theme

V. GUIDANCE AND COUNSELING

A. When an assembly or some other group is scheduled, invite a physician to school to speak about the effects of smoking: social, behavioral, psychological, physiological--a physician is suggested because many youngsters will listen to a doctor when they won't listen to a representative of some agency

B. A counselor might make a presentation to all incoming freshmen, or small groups of freshmen, about smoking and its relationship to lowering physical resistance, contracting disease, absenteeism, and the possible detrimental effect all these have on achieving success in school

C. Counselors should capitalize on every opportunity in individual or small group contacts to encourage positive smoking attitudes in teenagers

D. Counselors should consider constructing bulletin boards which have as a basic theme: "Why Smoke?"

E. The counseling department could have the printing department create simple bookmarkers for distribution to students throughout the year--

HIGH SCHOOL STUDENTS

Whether your dilemma is
where to go to college,
what job am I best suited for,
how should I plan my four year
high school schedule or should
I smoke because my friends do,
feel free to see one of your
school counselors. We are here
to assist our students in any
problems.

COMPLIMENTS OF
THE COUNSELING STAFF

VI. HEALTH

A. "Quiz Bowl"--have a mock television quiz program. Divide the class into two teams with each team composed of one half of the class; each team member will prepare three questions and give them to the quiz moderator (teacher); each member will be required to answer any questions at any time; a record of team and individual scores should be kept; include questions about smoking

B. Prepare a bulletin board display showing the substances found in tobacco and the parts of the body that each affects adversely

C. Invite a representative from the following (Appendix, page 136)
   1. American Cancer Society
   2. Iowa Tuberculosis and Respiratory Disease Association
   3. Iowa Heart Association
   4. A physician

D. Analyze cigarette advertisements clipped from magazines or taped from radio and television as to their accuracy and the techniques used to attract attention and to get people to start smoking and/or use a particular brand

E. After analyzing the advertising of various cigarette brands, open several samples to observe the differences in tobacco texture, structure and content of filters, amount of tobacco, tightness of tobacco as rolled in the paper, etc.

F. Discuss why the advertisements about filter quality are, in reality, an admission by the cigarette companies that cigarette smoke is harmful

G. A slogan contest, patterned after the above plan, might also be appropriate: suggest satire sayings for local usage such as: I'd rather die than switch; anyone can quit--it takes guts to face cancer; save your coupons for your flip-top casket

H. Discuss the relationship that smoking might have to the five known general causes of cancer:
   1. Mechanical--skin irritation (pipe smokers)
   2. Chemical--tars, carcinogens, dusts, carbons (smoke in the lungs)
   3. Heat--repeated overheating of an area (tongue, lips, bronchi)
   4. Prolonged exposure to the sun
   5. Exposures to x-ray or radio-isotopes

I. Conduct a match test: hold a lighted match approximately six inches from the open mouth; without pursing lips, blow it out; stress the fact that patients with advanced emphysema are unable to do this

J. Pre-plan with a student to stand up in class with an odd object in his mouth such as a carrot or piece of chalk; have students make comment on his appearance

K. Obtain experimenting apparatus from science department and conduct various smoking experiments

L. Place a piece of wool cloth in an area where it can get saturated by cigarette smoke; bring the cloth into the classroom and have each student smell its odor

M. Using satire, have the students act out various cigarette television commercials

N. Film and filmstrip suggestions for high school students (Appendix, pages 137-138)
   1. "Too Tough To Care"
   2. "Point of View"
   3. "Up in Smoke"
   4. "Beyond Reasonable Doubt"
   5. "To Smoke or Not To Smoke"

VII. HOME ECONOMICS

A. Girls are interested in the social aspect of smoking; a panel discussion including older student leaders concerning the social acceptability of smoking might be effective

B. Construct bulletin boards which may influence students' attitudes about smoking; topics might include
   1. The effects of smoking on the lungs
   2. How smoking affects the taste buds, appetite
   3. Being made a "sucker" by advertising
   4. Non-smoker being coerced by "friend" or gang

5. The effects of smoking on one's social status
6. Smoking's effect on one's pocketbook

C. Senior girls have a unit on mother and baby care during which an obstetrician can be invited in to discuss the effects of smoking on the unborn baby and on the mother's health

D. Show the film, "Beyond Reasonable Doubt"; this production deals with the functioning of the heart (Appendix, page 137)

VIII. LANGUAGE ARTS

A. Since advertising can constitute a unit on the influence of propaganda, cigarette ads in a propaganda unit would be a suitable method of introducing smoking education; students should be made aware of the advertisers' appeals--appeals should be labeled
  1. Some ads appeal to youth, freshness, buoyancy, etc. What is being sold in these ads? Discuss this question fully
  2. Some ads appeal to the he-man, "rugged individualist"
  3. Some ads appeal to loyalty, fidelity, conformity

B. Assign persuasive speeches in a speech unit; the purpose of the speech is to convince people not to smoke; also include speeches to persuade people either to start or to continue smoking

C. Word association by means of a spelling test could be used as a springboard for possible discussion of teen attitudes toward smoking, e.g.:

smoking
cancer

noxious
sensations

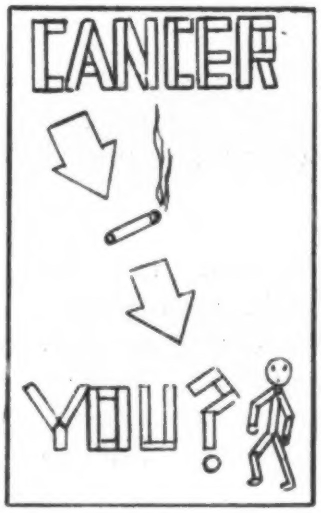
tobacco
addiction

chronic
nicotine
addict

The teacher might have the students consider these words from a vocabulary point of view; what do the words mean? Discuss denotative and connotative meanings

D. Rationality or irrationality of smoking could be discussed in a logic unit in relation to the validity of a generalization

E. For one week use a bulletin board display which illustrates inventiveness in constructing a bulletin board prior to a unit on creativity (this could also be used for a unit on propaganda); this should be constructed one week prior to the unit to generate comment; for example–



–Letters made of cigarettes pinned on board

–Pinned cigarette butt

–Stick figure made of cigarettes

F. Consider a debate on the pros and cons of smoking: "Resolve that the sale of tobacco and tobacco products be prohibited by law because of their harm to health"; one person could debate both sides

G. Discussion topic: Does smoking cause cancer? How often? (This would be suitable for a logic unit covering the generalization and hypothesis concept)

H. Creative writing on the topic "Who is kidding whom" in relation to the belief that putting warnings on cigarette packages is a deterrent to smokers

I. Assign a research topic--"Causes of coughing other than smoking" (this could also be reinforced by health classes)

J. After discussing what is a "vice" and what is a "virtue," consider the topic "Is smoking a vice or a virtue?"

K. Introduce the film "Too Tough To Care" as a pre-discussion of satire in the ninth grade; use the film as an example, then discuss it (although students may have seen the film already, it could be used again with emphasis on the satirical nature of the film) (Appendix, page 138)

L. Write poems on smoking using the *haiku* form.

M. Have the students write a poem on smoke after studying Sandberg's poem "Fog"

N. Have students write a drama on adult vices after a study of morality plays or Puritanism

O. Have students make up sentences illustrating grammatical errors; the sentences could allude in some way to smoking (when the teacher is using sentences to illustrate a grammatical concept, he could utilize the smoking theme)

P. In a discussion of prejudice, one could draw a parallel by showing that, like the racial problem, parent practices influence what the child does, e.g., if a parent smokes, the child thinks he should also smoke

Q. What is the basis of the cliche, "Do as I say, not as I do?" Discuss this in an attempt to broach the smoking theme

R. Select a comittee of students to observe tobacco ads on television and in magazines, and attempt to determine:
   1. Why people smoke a particular brand of cigarettes
   2. Why a filter is claimed to be beneficial
   3. The implications of such advertising

S. Discuss how to ask an intelligent question; have the class make a list of relevant questions that can be raised about tobacco and health and ask individuals or groups to research the "answers" for later class discussions

T. Have the students list and analyze all the "things they have heard" about the effects of smoking to assess the validity of such claims; discuss the unreliability of word-of-mouth evidence as a source of information

U. A journalism class could contact the Cancer Society to arrange an interview with an emphysema or lung cancer patient; this would be good practice in interviewing and editing each other's copy

V. Another interviewing activity would be to select certain students to ask their parents or friends the following questions (depending upon whether or not they are smokers)
   1. Smokers
      a. Why do you smoke?
      b. How did you feel the first time you smoked?
      c. Would you really like to stop? etc.
   2. Non-smokers
      a. What are your reasons for not smoking?
      b. Did you ever smoke?
      c. If you did smoke, how did you stop?

W. Have reporters interview the following people in regard to their concern for smoking and health:
   1. A tobacco salesman
   2. A tobacco advertising executive
   3. A physician
   4. An athlete

5. A person trying to stop smoking

XI. JOURNALISM

A. Analyze cigarette advertisements clipped from magazines or taped from radio and television as to their accuracy and the techniques used to attract attention and to get people to start smoking and/or use a particular brand

B. Write a series of one-minute or less spot announcements on the deleterious effects of smoking that might be used by local radio stations

C. Interview smokers and non-smokers and write up their views on smoking, cost, social status, and health

D. Respond to the statement, "It is estimated that 1,000,000 children now in school will die of lung cancer"

X. LIBRARY

A. Resource table--smoking materials could be placed on a reference table in the library for student browsing

B. Files--files containing pamphlets on smoking for students' reference will be kept available in the library

C. Books--available books on smoking will be displayed in the library and referenced in the card catalog

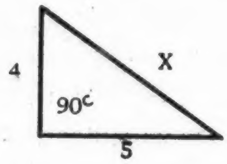
D. Facts on cancer--materials could be made available to teachers through the library

E. Bulletin board display--could be permanent or change ideas frequently

XI. MATHEMATICS

A. Use cigarettes in story problems
   1. What is the length of an average cigarette and how many would it take to make a mile?
   2. If cigarette smoke travels up at the rate of one foot per second, how far would it travel in one hour?

B. Use the dimensions of the cigarette to depict distances or size, e.g., the length of a cigarette is 3-1/2 inches; "a" side is 4 cigarettes end to end; "b" side is 5 cigarettes end to end; "E" angle is 90°; find missing sides and angles



C. Calculate the cost of smoking one pack of cigarettes per day for a year, 10 years, 20 years

D. Draw any size cigarette on the board in chalk; have students measure the cigarette and give a ratio of its size to the wall or blackboard

XII. MUSIC

A. Consider the effects of smoking on the musician
   1. Reduced lung capacity affects wind and brass and vocal musicians by reducing breath control and breath support needed to perform expertly
   2. Excessive smoking produces throat irritations for the instrumentalist by causing delays in tone production, resulting in an inadequate performance level and for the vocalist by impairing the projection of a pure, clear sound
   3. Excessive smoking may possibly irritate the eyes, causing redness and blurring which may impair vision; this is more apparent to the non-smoker surrounded by smoke than to the smoker musician already conditioned to smoke-filled surroundings
   4. Excessive smoking dulls the senses and slows down reactions which affect the musician by impairing his

reading ability and his manual dexterity

5. Though applicable in some instances, excessive smoking has not produced notable effects on many professional musicians; therefore, one cannot draw conclusions on them. However, the teacher might mention the many professionals who have died from lung cancer--Nat Cole, etc.

B. How music teachers might specifically influence student attitude concerning smoking
   1. Music teachers may mention that they expect top quality students, hoping that they are grown up enough and intelligent enough so that they do not need to rely on smoking stimuli
   2. The integrity and character of the teacher might influence the students' actions

XIII. PHYSICAL EDUCATION

A. Keep a reading table handy for those people unable to participate in the activity for the day; have on hand pamphlets about smoking

B. Students who must make up class work can make reports on tobacco and smoking

C. Display slogans, posters, and bulletin board arrangements depicting the athlete and smoking not mixing

D. Test the classes in lung capacity by using a vitalor available on loan from a hospital

E. Give a brief sketch on conditioning and how smoking retards it

F. Invite guest athletes to speak on or perform their skills and to give advice on smoking

G. Have guest coaches give their thoughts on the harm of smoking

H. Obtain films by Rev. Bob Richards from General Mills on "Sports and Attitude"

I. If physical exams are given in the school for athletics or physical education, have available a sample of cancerous lung tissue on display near the attending physician

J. Periodically throughout the year, display smoking results such as cancerous tissue, blackened lung, etc.–with comments

XIV. SCIENCE

A. See experiments (Appendix, pages 123-129)

B. Work with the art department in regard to bulletin board displays

C. To demonstrate cilia action, obtain from a slaughter house fresh cilia-bearing tissue to show cilia movement; while object is being transported by cilia, blow smoke on cilia to show effects of smoking on cilia action

XV. SOCIAL STUDIES

A. Approach smoking generally throughout the year in three manners:

   1. "Puritan" approach--smoking is a filthy, odorous, etc., habit
   2. "Face the Facts" approach--science says cigarette smoking is hazardous to health
   3. "Uncommon Man" approach–as an individual, do I have a reason for smoking?

   These three methods can be used in the various social studies classes throughout the year; a discussion of cigarette smoking may not be applicable in every unit of study

B. Discussion, written and oral reports concerning the dependency of areas of the world on tobacco industry incomes

C. Discussion, written and oral reports on the history and importance of tobacco and smoking habits in the United States as compared to certain other countries

D. Discuss and write reports concerning the breaking down of American conformity

E. Assign individual or small group research in legislative processes and pressure groups concerning the cigarette industry

F. In current events units, the class might use materials from the American Medical Association, Surgeon General's Report, American Cancer Society, etc.

G. Select students to collect news clippings which relate to smoking; distribute one to each student or to pairs of students. After clippings have been read, discuss why so much is written on cigarette smoking and its relation to lung cancer, heart disease, emphysema, and other diseases.

H. Select small committees to prepare for full class presentation and discussion factual information and a plan of action on the problem, "Should adults, teens smoke?" This committee could discuss such topics as

1. Whether persons who do not smoke lose the respect and friendship of their peers
2. Whether speaking up on an issue develops leadership
3. Whether the courage of convictions is a sign of maturity

I. Analyze advertisements which claim benefits for smoking a particular brand of cigarettes; students may be grouped in small committees, and each committee may analyze the advertisement to determine

1. Which statements are essentially true and which are misleading?
2. What sources of information can be found for determining whether statements are true or misleading?
3. What can the government do about misleading information or advertising?

J. Excerpted below from several sources are "opinions" which lend themselves to classroom debate; present the affirmative and negative sides of the statements; individual students may present two sides of the question to the class for reaction

1. "The cause of cancer is unknown so how can one say that cigarette smoking causes lung cancer?"
2. "Not all cigarette smokers or even heavy cigarette smokers develop lung cancer."
3. "There is no longer any doubt that cigarette smokers have a higher death rate than non-smokers. New biological studies help to explain how tobacco smoke damages the lungs, heart, and other body tissues."
4. "Whether the attraction of tobacco is based mainly on a pleasure principle or on its subtle tranquilizing influence; it is wise to remember that for many persons, breaking the habit is a nerve-wracking experience; indeed, it is one that few individuals manage to effect gracefully."
5. "One national life insurance company has come out with a 5% reduction in premiums for the non-smoker. Other insurance companies are considering plans for reduction in premiums. There is no basis in fact that the non-smoker is a better insurance risk."
6. "The American Public Health Association states that one million school age persons today are expected to die of lung cancer before they reach the age of seventy. While the possibility of increased life ex-

pectancy through non-smoking has little meaning to many people, still this predicted toll of life is one that we must not ignore."

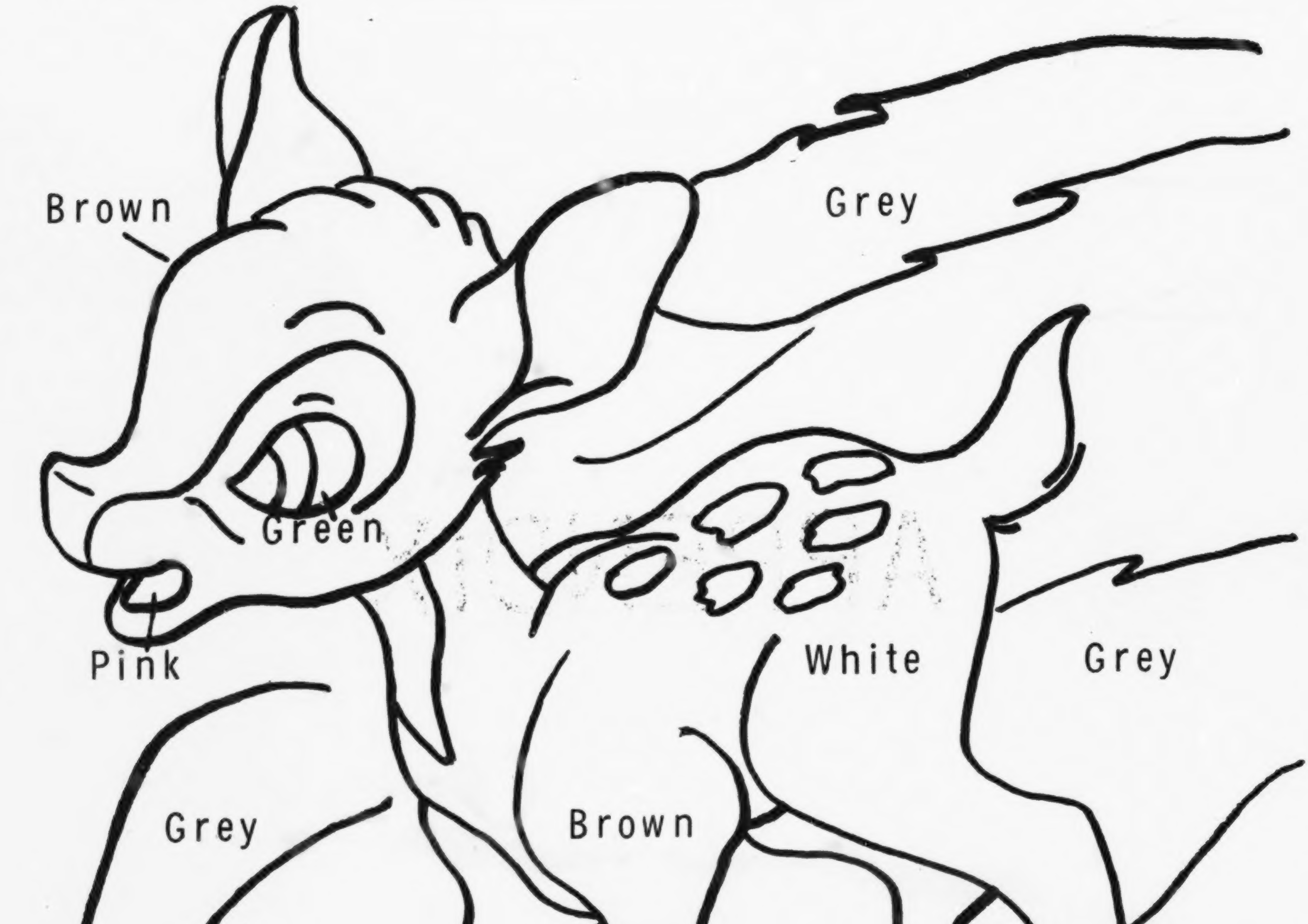
7. "The very fact that cigarette manufacturers advertise that one filter cigarette has less tars and nicotine in it than another is an admission that cigarette smoking is definitely detrimental to maintaining good health."

K. In an economics unit, conduct surveys to determine the cost of advertising by tobacco companies
   1. Determine how much TV time is paid for per week on locally-watched stations. Contact a business manager from one station to get a rough estimate of the cost of this time to tobacco companies
   2. Determine how much time is paid for on programs of local radio stations. From a manager of one of the stations, get a rough estimate of this cost to tobacco companies
   3. From within the weekly magazines that come to the homes of the students, determine the number of pages of color advertisements that are purchased by cigarette manufacturers. From a business manager of a local newspaper, get a rough estimate of what this advertising costs
   4. After obtaining the above requested information, combine it and compare it with the amount that is spent each year for the research on a cure for cancer

L. Independent study and class reports
   1. Make a study of "Depth Approach" techniques in advertising based on motivational research; Vance Packard's *The Hidden Persuaders* (Appendix, page 135) provides a useful source for identifying these methods. Cigarette advertising can then be analyzed to determine which of these motivational impulses they appeal to
   2. Secure from books or other source, lists of propaganda techniques; indicate how these are employed in cigarette advertisements
   3. Have a student or a group of students research the laws regarding the sale of tobacco to minors and prepare written or oral reports on the topics:
      "Laws–Do They Really Help?"
      "Does a Law Produce Desired Results--Why or Why Not?"
   4. Use the problem-solving approach for individual research on smoking and health
      a. Collect data on a problem related to smoking; include such facts as: the smoker's need for a tension outlet and the lack of a suitable substitute; rationale of people who reject the research findings on the ill effects of smoking; the concept of addiction; that tobacco smoking is habit forming; that many people are still uninformed about the facts regarding the dangers of smoking; that people feel a "need to smoke" to feel sophisticated (a psychologist or psychiatrist may be called in to explain the effects of habit or addiction on an individual and the problems related to breaking such habits)
      b. Analyze what has been learned about the problem
      c. Draw conclusions about why those who "know better" still continue to smoke and about what this may mean for the students in the class

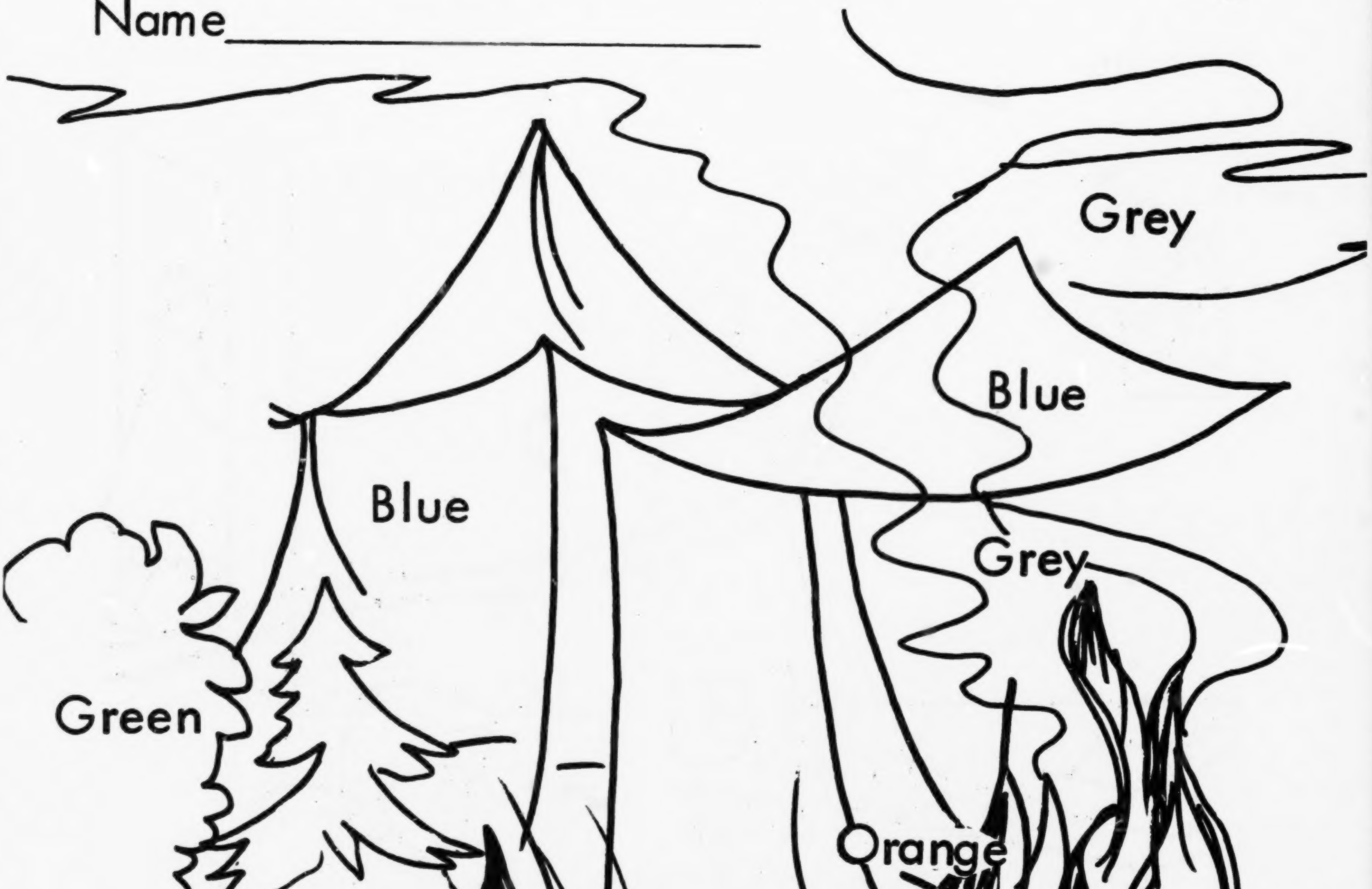
APPENDIX

Name______________________________


Brown
Grey
Green
Pink
White
Grey
Grey
Brown
Green
Red
Green
Bambi

"Mother! Where are you?
I smell smoke!"

Name________________________


Grey
Blue
Blue
Grey
Green
Orange
Green
Brown
Red
Red
Brown

Fire ! Fire !
Careless people made this fire!

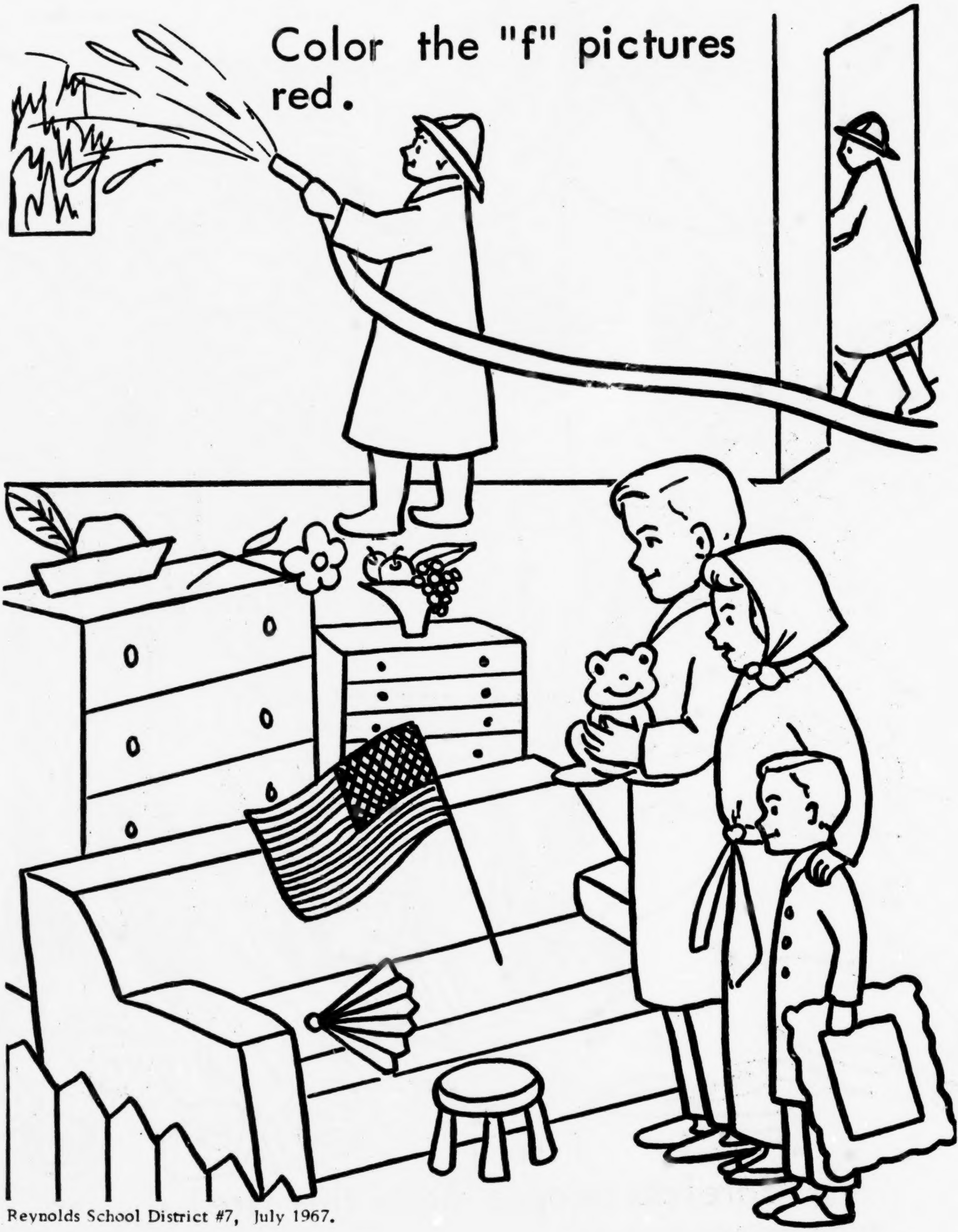
Reynolds School District #7, July 1967.

Recommended for Grades K-1

Firemen to the Rescue

Name ______________________________

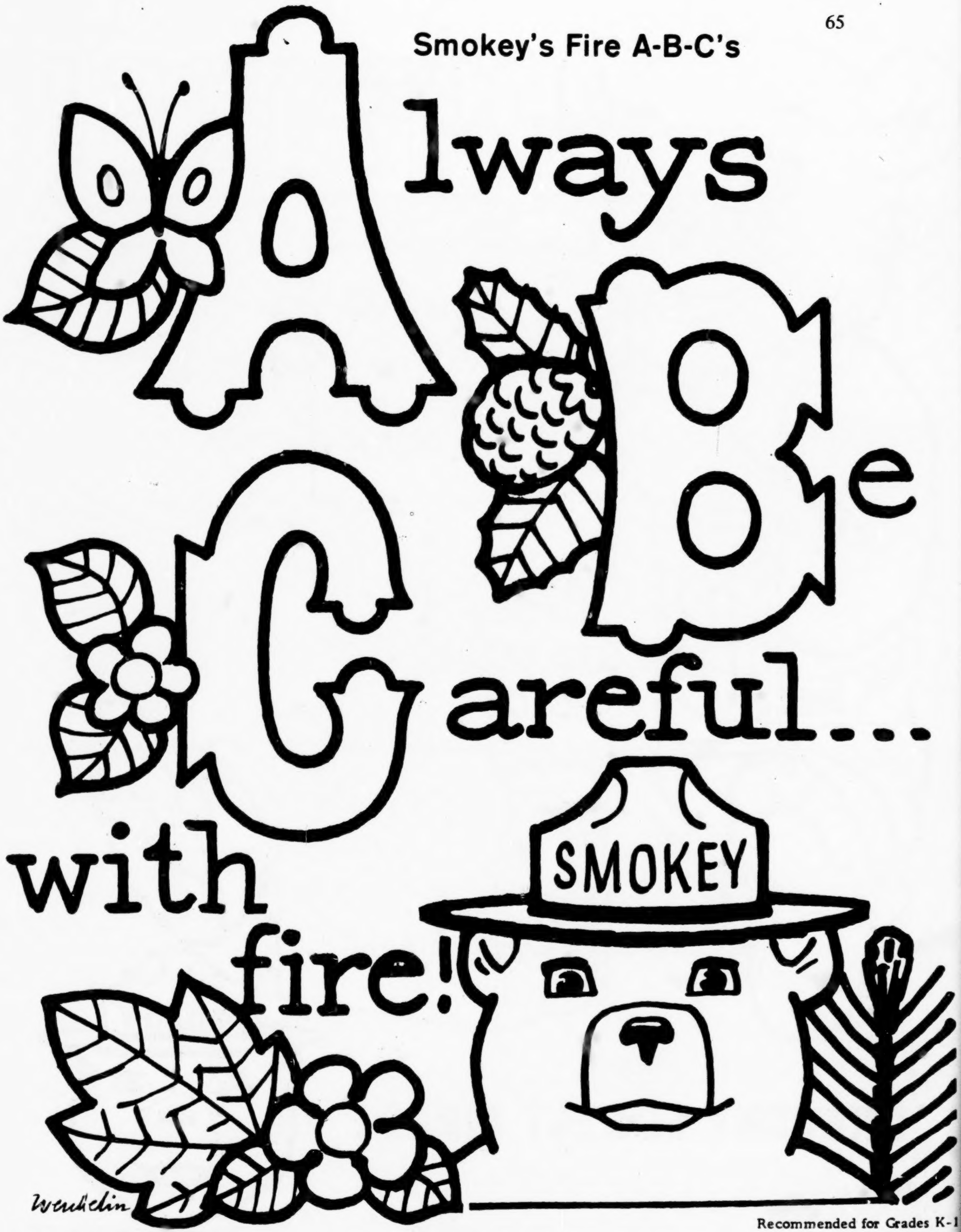
Color the "f" pictures red.



Reynolds School District #7, July 1967.

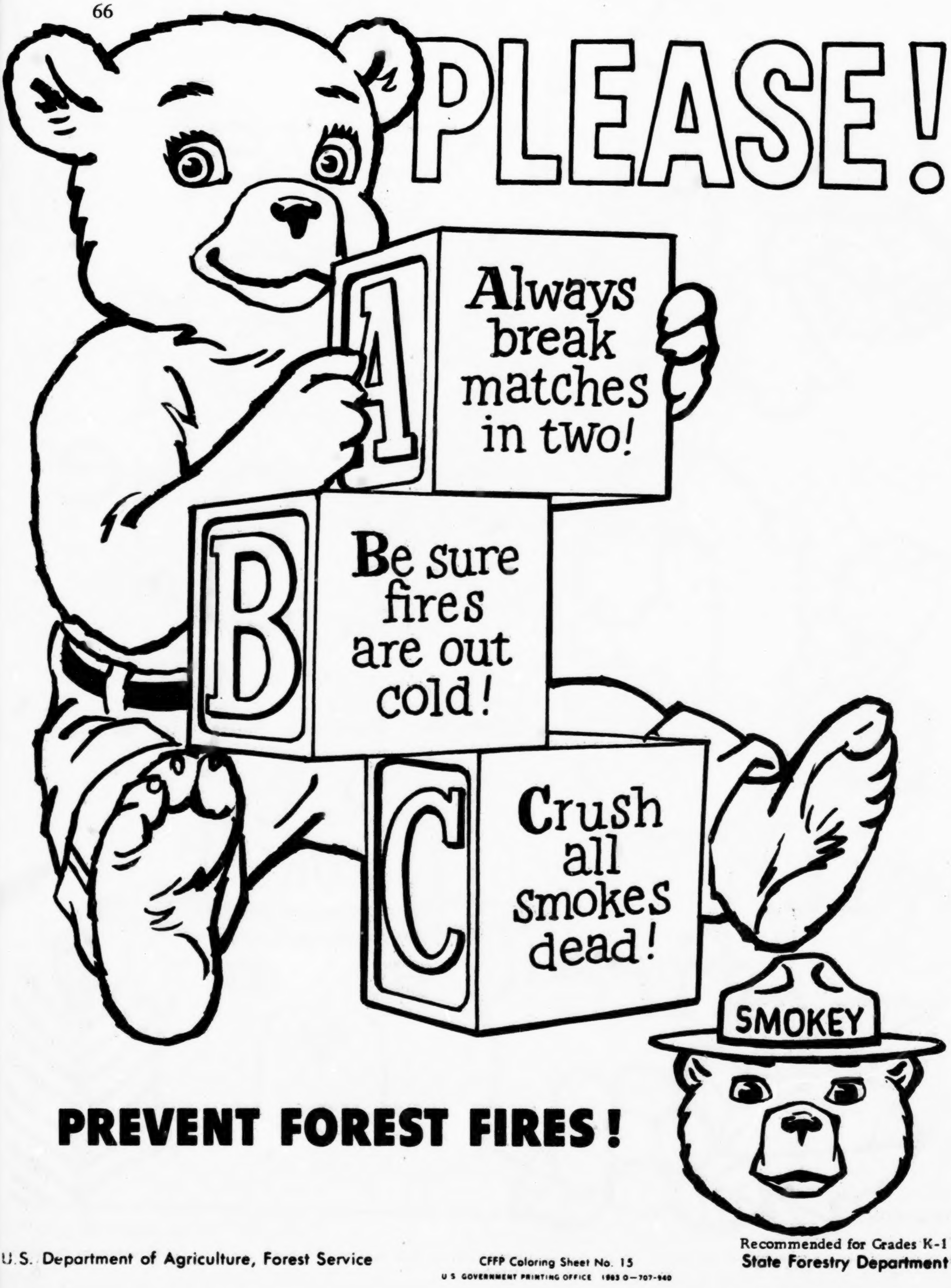
Recommended for Grades K-1

Smokey's Fire A-B-C's


Always
Be
Careful...
with
fire!
SMOKEY
Wendelin

Recommended for Grades K-1

U.S. Department of Agriculture—Forest Service CFFP Coloring Sheet No. 21 State Forestry Departmen

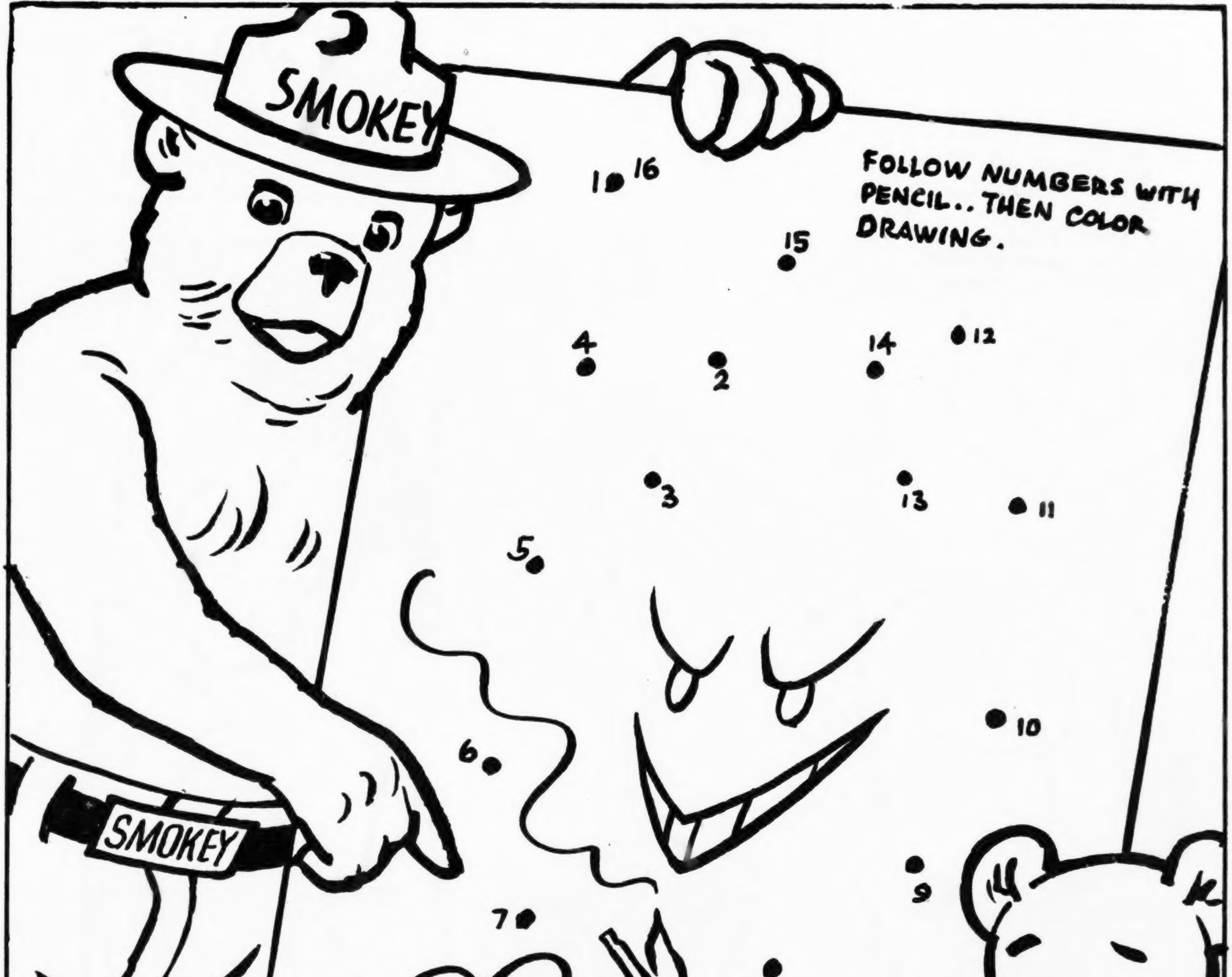

PLEASE!
A
Always break matches in two!
B
Be sure fires are out cold!
C
Crush all smokes dead!
SMOKEY
PREVENT FOREST FIRES!

U.S. Department of Agriculture, Forest Service

CFFP Coloring Sheet No. 15

U S GOVERNMENT PRINTING OFFICE 1963 O—707-940

Recommended for Grades K-1
State Forestry Department


SMOKEY
SMOKEY
FOLLOW NUMBERS WITH PENCIL.. THEN COLOR DRAWING.
1
16
15
4
2
14
12
3
13
11
5
10
6
9
7
8

Little fires run away,
Burn up forests every day-
PLEASE, DON'T PLAY WITH MATCHES

U.S. Department of Agriculture—Forest Service

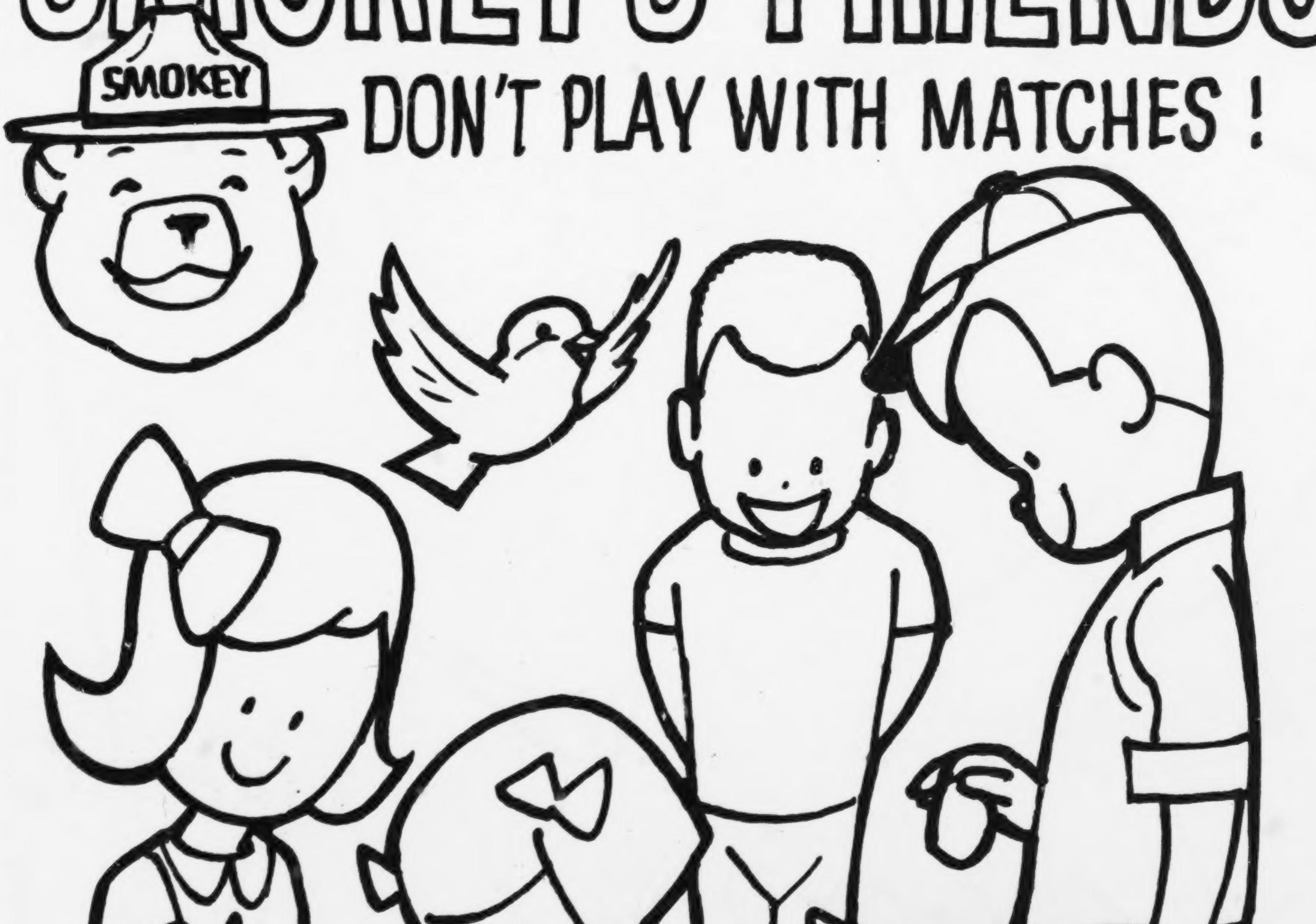
CFFP Coloring Sheet No. 16

State Forestry Department
Recommended for Grades K-1

U S GOVERNMENT PRINTING OFFICE 1964 O—746-549

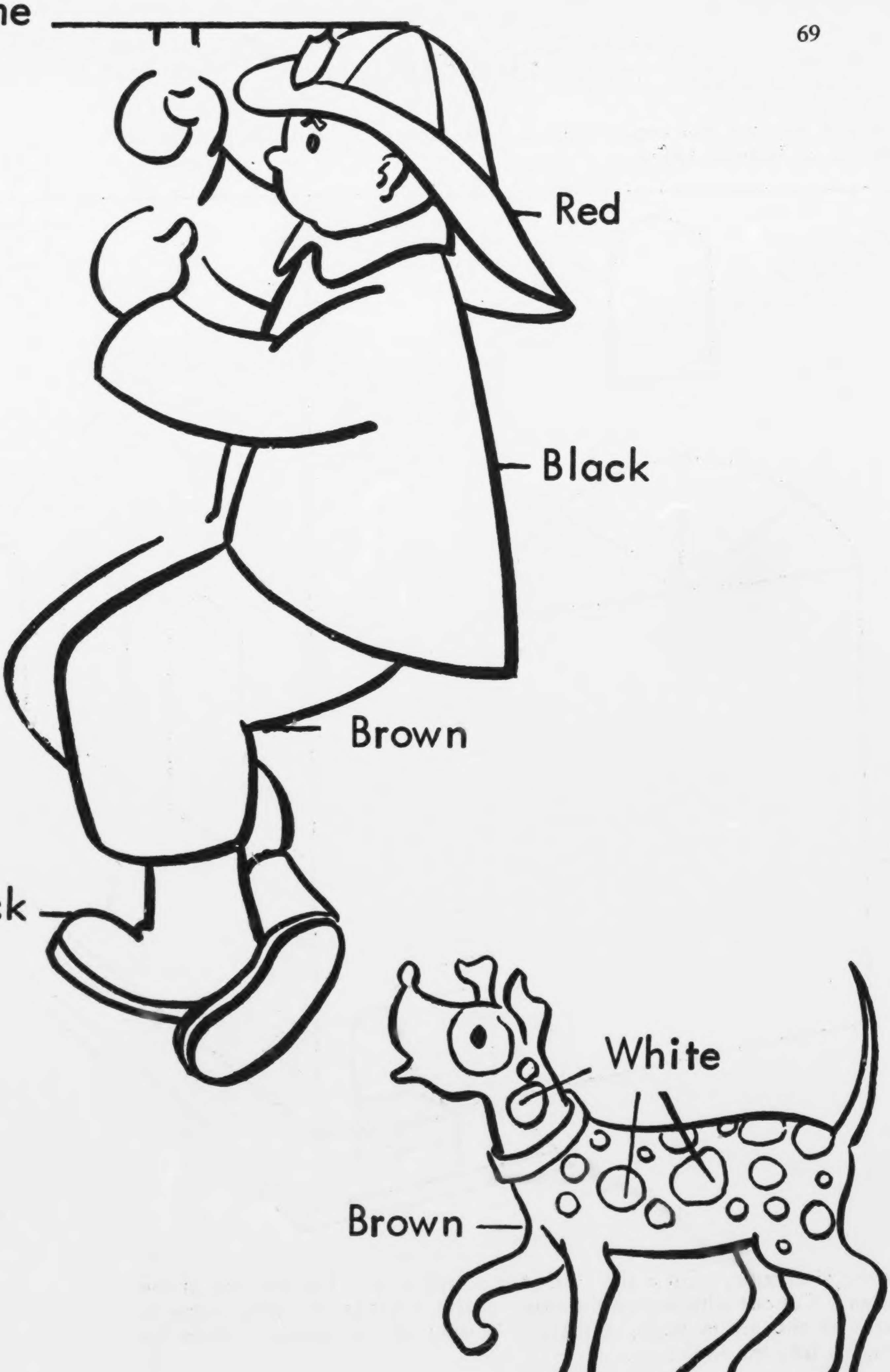
SMOKEY'S FRIENDS

DON'T PLAY WITH MATCHES !



U.S. Department of Agriculture—Forest Service
CFFP Coloring Sheet No. 22
Recommended for Grades K-1
State Forestry Department

Name ______________________

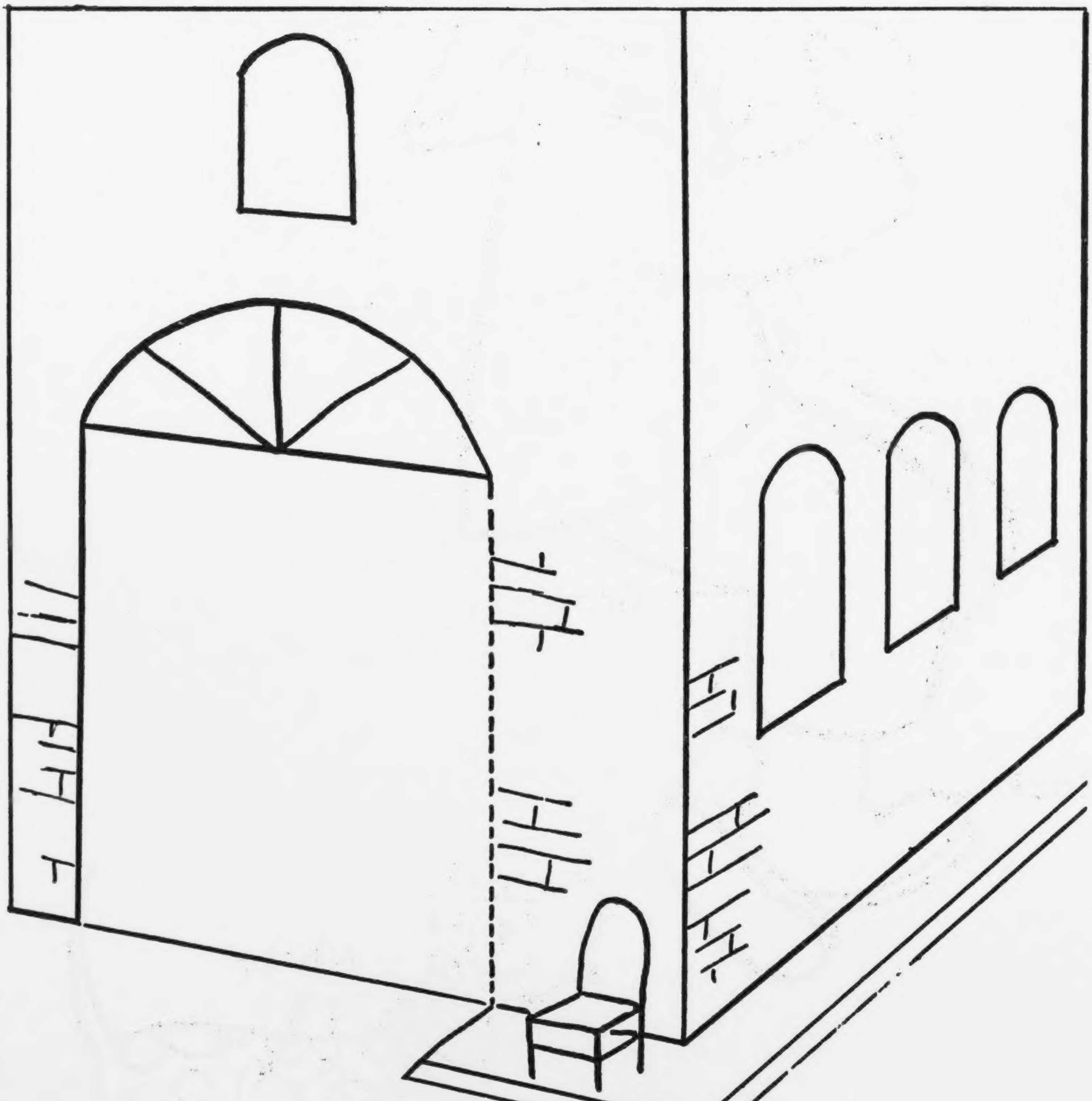

Red
Black
Brown
Black
White
Brown

Draw the pole for the fireman to come DOWN.
Color it green.

Reynolds School District #7, July 1967
Recommended for Grades K-1

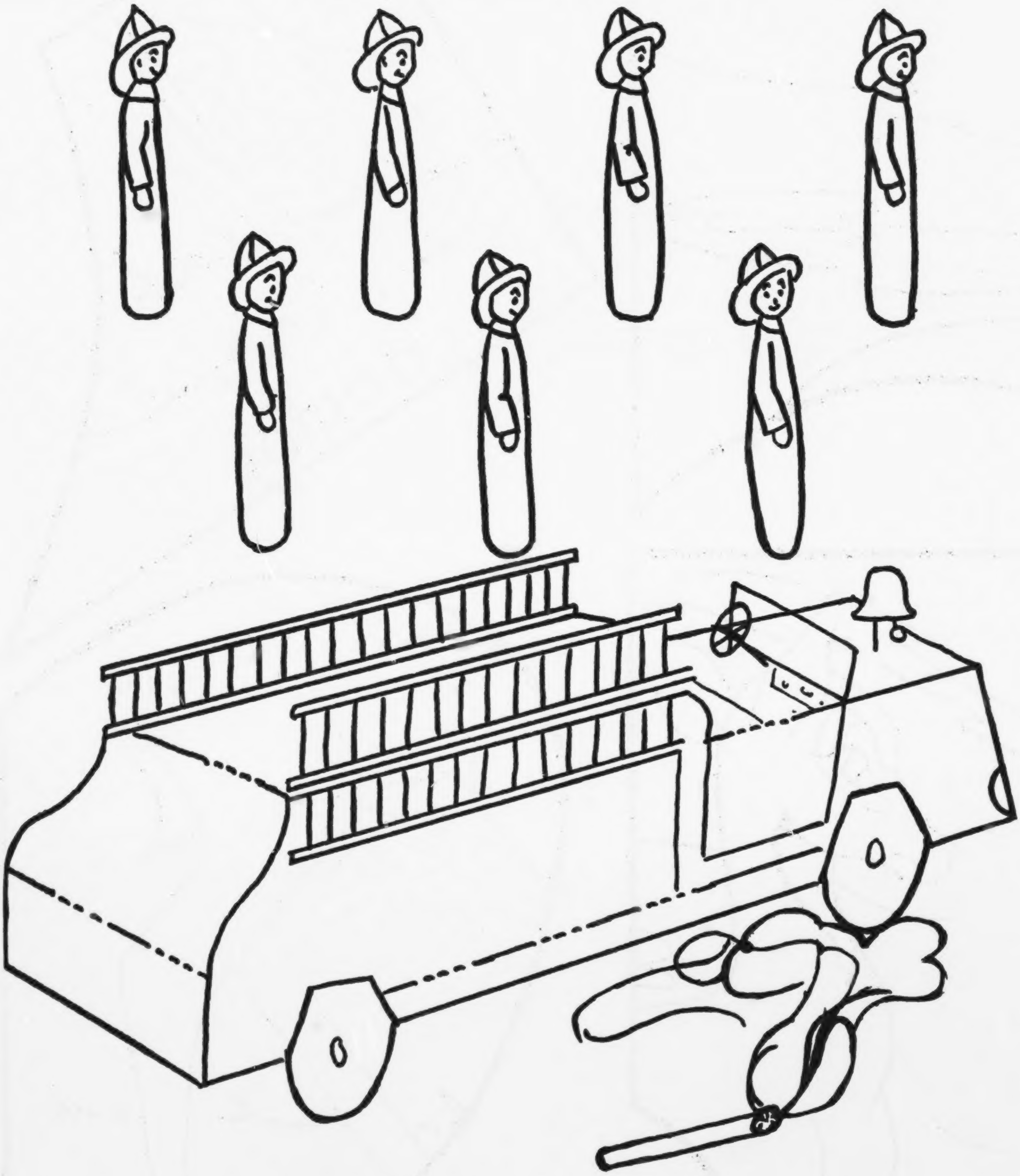
Fire Station

After you cut out the engine and put the firemen in the slots, finish the firehouse as directed below.

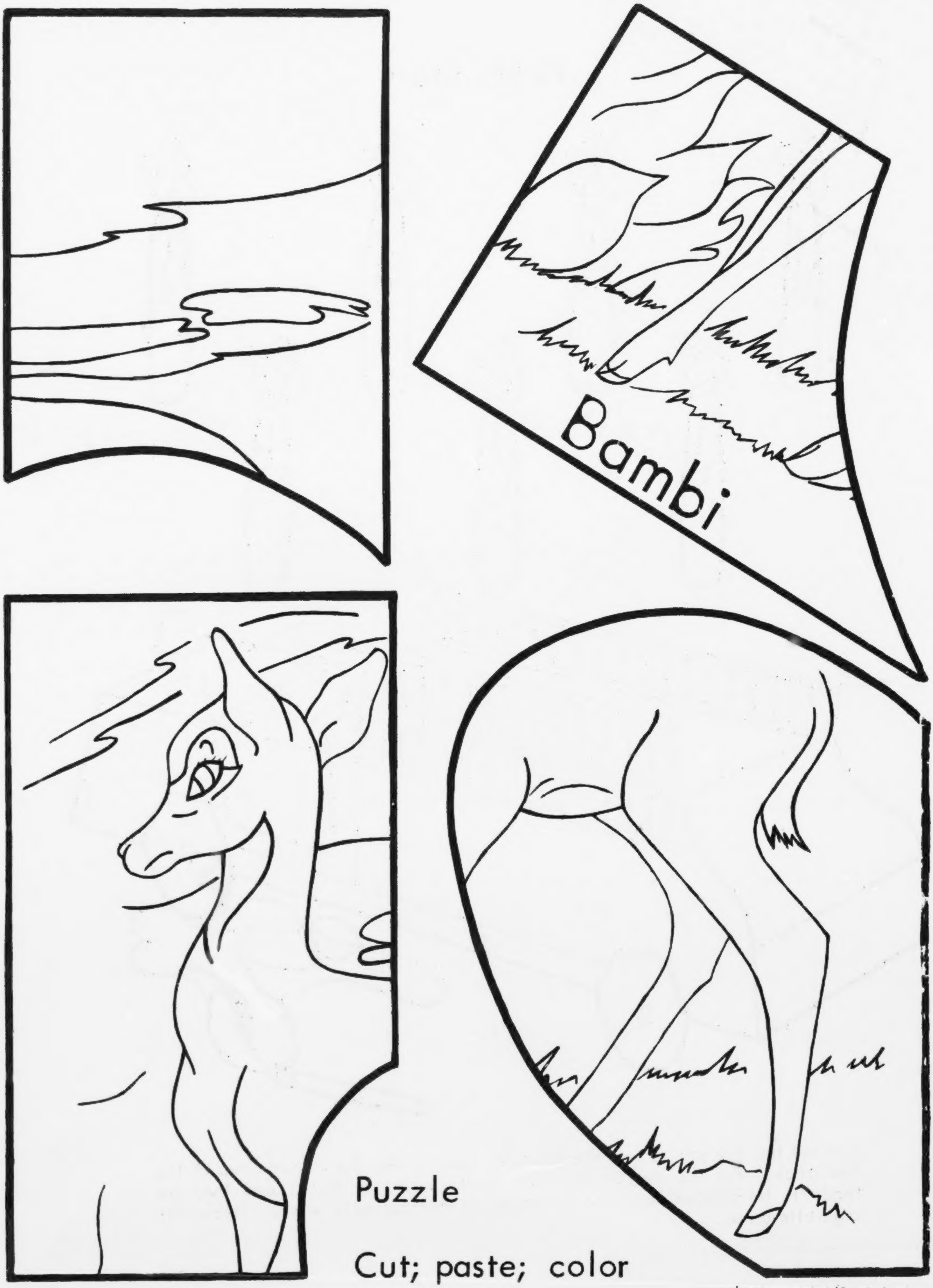


Color the firehouse. Cut a slit along the dotted line in the doorway of the firehouse. Cut out windows on the side. Paste a piece of heavy paper to the back of the entire page, attaching it only at the corners. Slide the fire engine into the firehouse.

Firefighters



Cut out the fire engine and the firemen. Cut along the dotted lines of the fire truck. Put the men in the slot openings on the truck, and they are ready to be slipped into the firehouse on the opposite page. Throw the cigarette away.

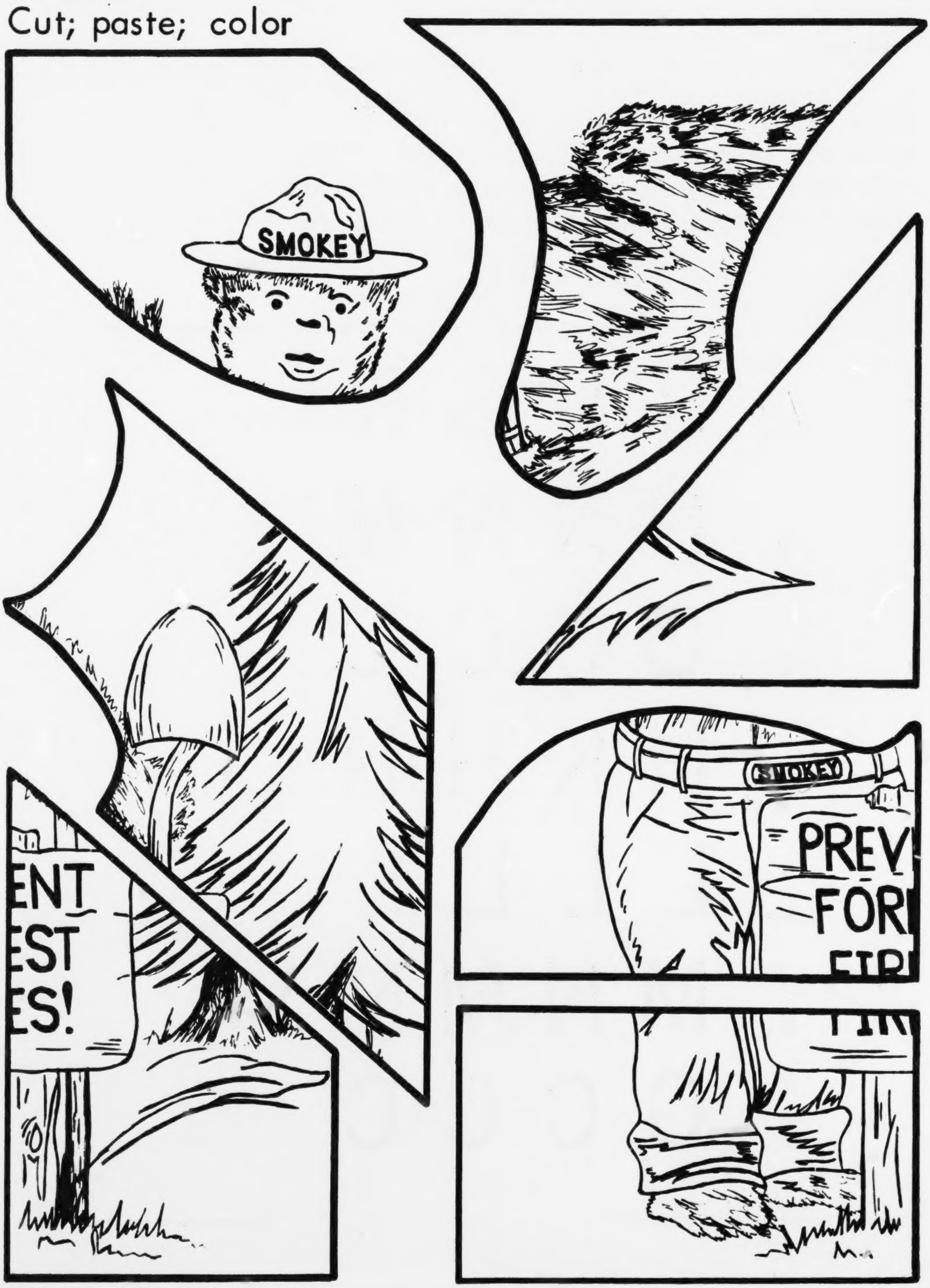


Puzzle

Cut; paste; color

Recommended for [illegible]

Puzzle
Cut; paste; color


SMOKEY
SMOKEY
ENT
EST
ES!
PREV
FOR
FIR
FIR

Adapted from U. S. Forest Service. Recommended for Grade 2

NAME________________________________

Draw a circle around the letter that is different in each row. Color it red. You will spell the name of something that is not good for people. Put the letters here.

_____ _____ _____ _____ _____ _____ _____

1. R R S R
2. N N N M
3. O C C C
4. H K H H
5. L L L I
6. M N M M
7. G C C C

SMOKEY'S FIRE A-B-C's

(Cut apart; make an a-b-c's poster.)

Careful!
Get
Always
Make
Quite
The
Yew wood, and
Valuable
On
Keep a
Be
Ever
Help
Places
Save
X-ray film
No fires - except
Removed from dry leaves, trash.
U.S. forests, for use and enjoyment.
Don't
Just
Zebra wood
Woodlands give us many products as
Lookout - for fires!
Immediately - if fire gets away!
Forget! Only you can prevent fires.

Recommended for Grade 2

Name____________________ Date____________

Fix these words the way the a-b-c's come.

fire
cancer
tar
match
habit
emphysema
tobacco
burn
oxygen
poison
x-ray
lung
air
smoke
disease
inhale
risk
nicotine

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.

Now write all the a-b-c's.
How many are there?____________

Name____________________ Date__________

Choose the right word. Draw a line under it.

1. A fireman has a (bed, red) hat.

2. A (fire, tire) is very hot.

3. (Broke, Smoke) hurts your eyes.

4. A disease makes you (sick, sack).

5. Air makes a fire (turn, burn, barn).

6. Water puts a fire (owl, out, oat).

7. Cover your mouth when you (cry, cat, cough).

8. We should eat good (food, wood).

9. Smoking is not a good (rabbit, habit) for us.

10. Call the fireman first to (hope, help, have) you stop a fire.

Find the F's

The firemen arrived in time to put out the fire and save almost everything. How many things can you find on page 46 that start with the letter F? Fill in the blanks below with the right letters. If you see something starting with F and having four letters, put it in a four-letter space.

Name ______________________

Date ______________________

F _ _
F _ _ _
F _ _ _ _
F _ _ _ _ _ _ _ _ _ _ _
F _ _ _
F _ _ _ _ _ _
F _ _ _ _
F _ _ _ _ _
F _ _ _
F _ _ _
F _ _ _ _ _
F _ _ _ _
F _ _ _ _ _
F _ _ _ _ _ _
F _ _ _ _ _ _ _ _

Reynolds School District #7, July 1967.

Recommended for Grades 2-3

GAMES

FIRE ENGINE GAME

6 to 40 players
Any play area. There must be a starting line and a parallel line about 40 feet distance. Length of line depends on number of children playing.

FORMATION:
Small groups of players--Each player has a number. All players stand behind, but near the starting line. One child is the fire chief. The chief is out the side and half-way between. There may be as many signals as there are numbered groups. (Groups of four--Each child has a number)

To give a signal the fire chief may clap his hands, count aloud, or jump into the air the desired number of times. At the end he shouts loudly "FIRE." The numbers of the group start running when he shouts "FIRE." They must run across fire line and return and cross starting line. If chief calls "GENERAL ALARM!" all the players run. This signal should not be given too frequently. First runner is new fire chief.

FIREMEN

(Another version of Fire Engine Game)

6 to 30 players
Any large play area
2 parallel goal lines 6 to 25 feet long, 40 to 50 feet apart

FORMATION:
One player in front of group and rest of group stand on line facing leader. This is the fire chief who stands about 15 feet away from the group. He numbers off the group by fours. When he gives the alarm, he cries "FIRE, FIRE STATION NO. 2 (or 1, 3, or 4). All those having the called number run to fire which is the other goal. They touch the line, run back and tag fire chief's hand. The first player is the next fire chief.

FOREST LOOKOUT

15 to 41 players
Any large play area

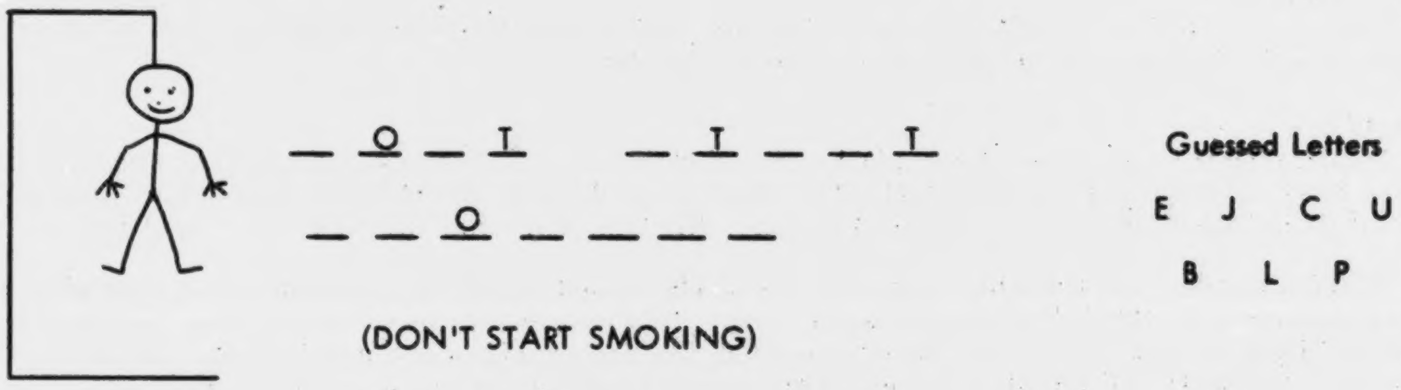
FORMATION:
Two circles are formed: outside circle behind inner circle. The outside circle represents fire fighters--inside players are trees.

One player is the Lookout. He stands in center of the circle.

PROCEDURE:
Lookout calls loudly "FIRE IN THE MOUNTAIN, RUN, RUN, R-U-N!" and at the same time claps his hands. On hearing the last RUN the outside players run around the circle to the right or left--all in the same direction. While the firefighters are running, the Lookout steps in front of a tree. Runners who see Lookout do this likewise. Player without a tree becomes a Lookout. Former fighters are now trees.

HANGMAN'S GAME

Someone thinks of a word or sentence to have the class guess. They put down the blank letters beside a scaffold. The child or children take turns attempting to guess the words the writer intended. If a child says the wrong letter, part of the body is hung on the scaffold, starting with the head. A correct letter is written in the right spot. The aim of the game is to hang the player before the word or sentence is completed.



(DON'T START SMOKING)

SQUIRRELS IN A TREE

Players--any group
Space--any play area

FORMATION:

Two-thirds of players make couples--face each other and put hands on each other's shoulders. In this manner they form hollow trees. The trees are scattered about the room without definite formation. The remaining one-third enter trees as squirrels and stand there. One or more squirrels are without a tree house.

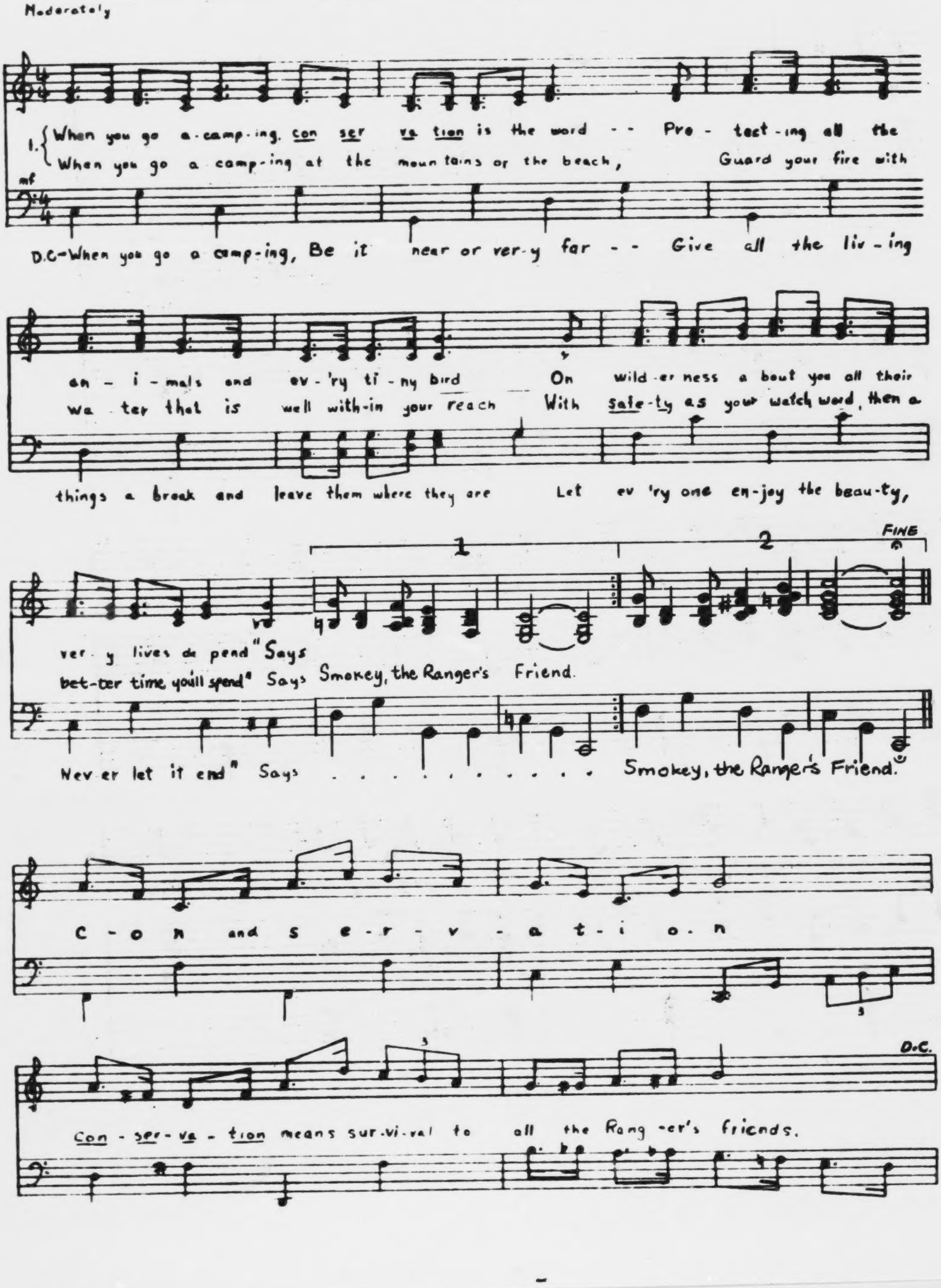
A leader, teacher, or classmate claps hands or blows a whistle. All squirrels run to find new homes. Squirrels may not return to same tree immediately. Those unsuccessful to find homes miss a turn and wait their chance with the next signal.

At first have only one odd squirrel--later there can be more. Signals should be given in rapid succession. Have trees scattered to promote vigorous running exercise.

Words by Nancy T Smuck

Music by Jean C. Hoem

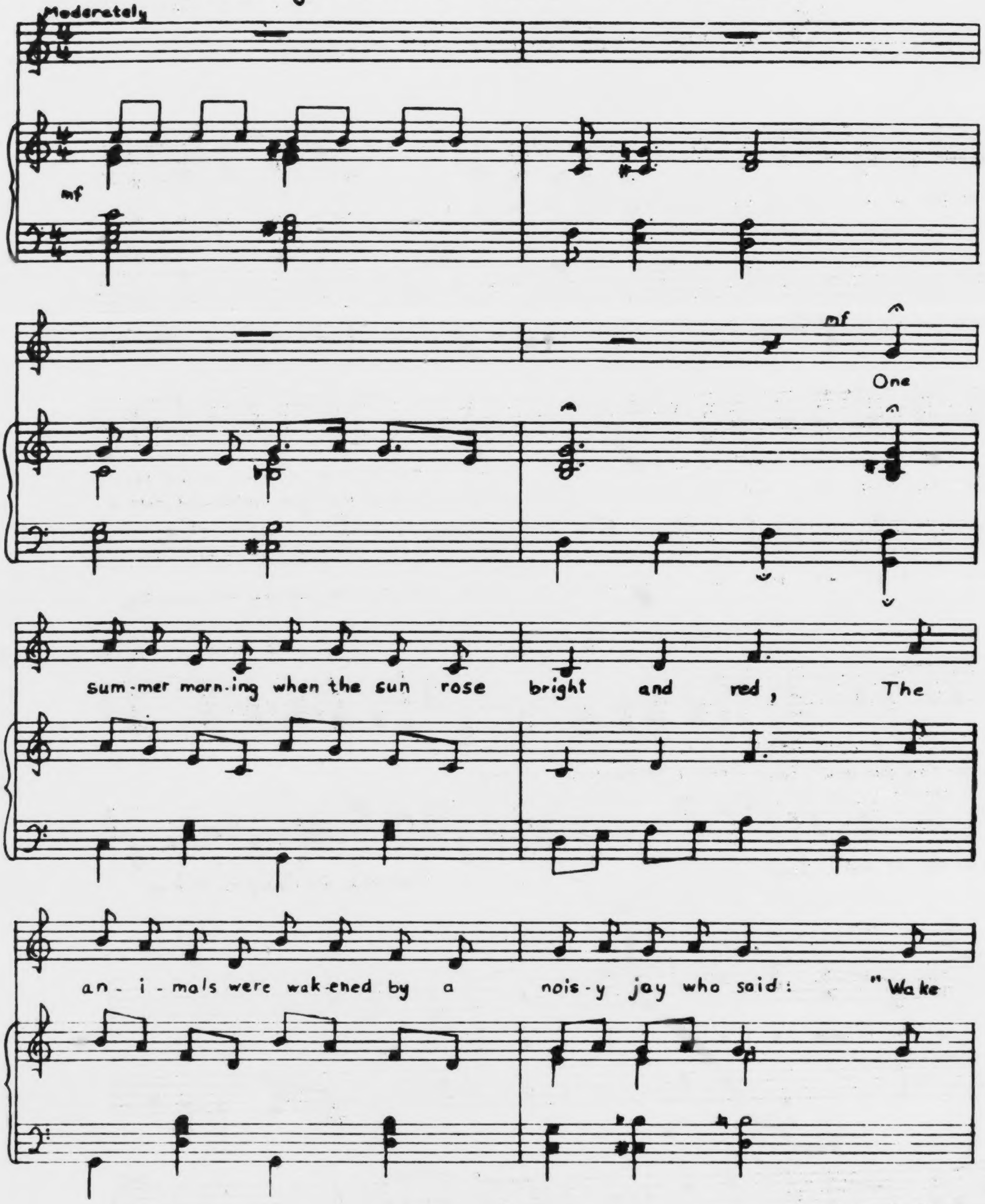
"Smokey, the Ranger's Friend"

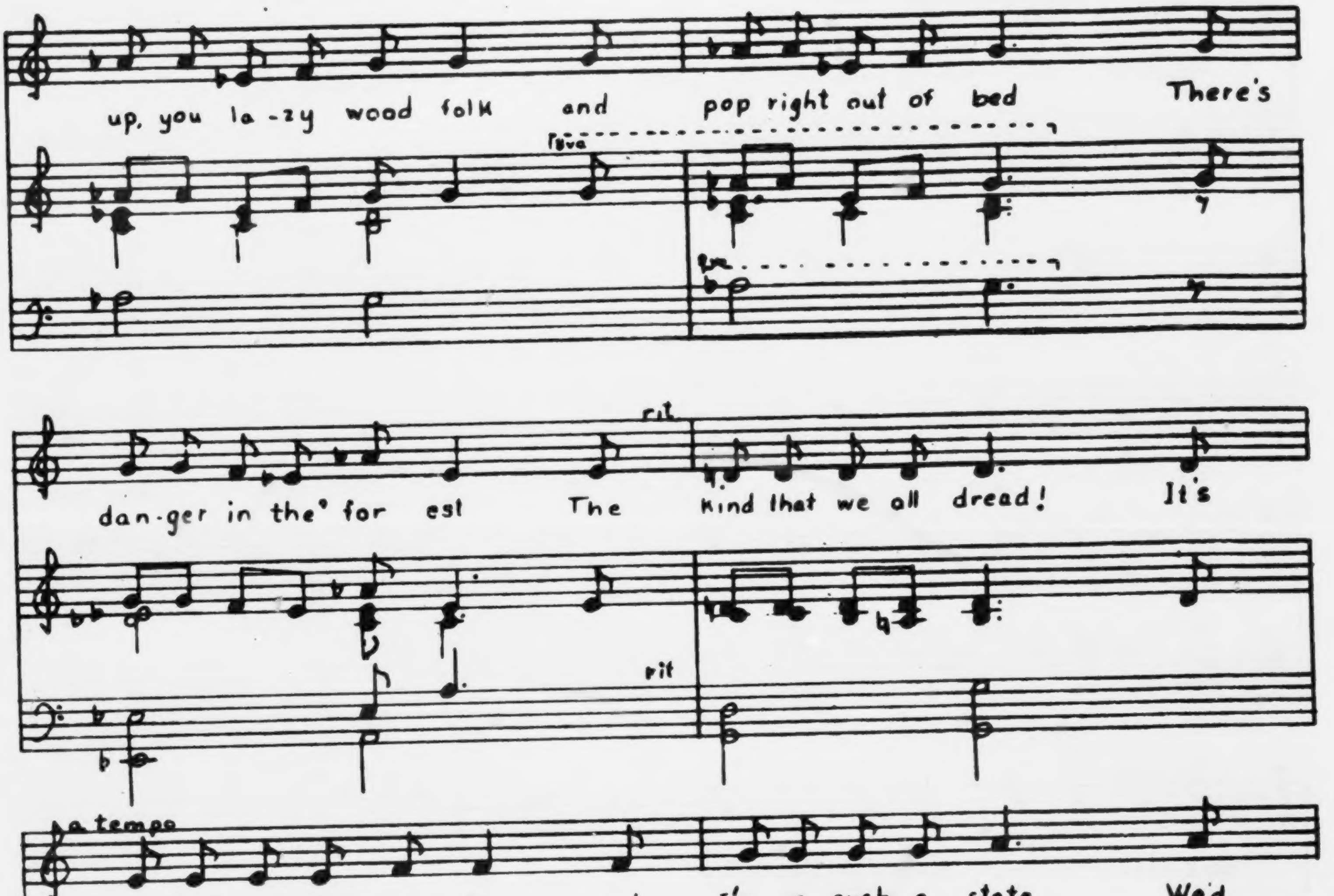

Moderately
mf
1. When you go a-camp-ing, con-ser-va-tion is the word -- Pro-tect-ing all the
When you go a-camp-ing at the moun-tains or the beach, Guard your fire with
D.C.—When you go a-camp-ing, Be it near or ver-y far -- Give all the liv-ing
an-i-mals and ev-'ry ti-ny bird On wild-er-ness a-bout you all their
wa-ter that is well with-in your reach With safe-ty as your watch word, then a
things a break and leave them where they are Let ev'ry one en-joy the beau-ty,
1
2
FINE
ver-y lives de-pend" Says
bet-ter time you'll spend" Says Smokey, the Ranger's Friend.
Nev-er let it end" Says . . . . Smokey, the Ranger's Friend."
C-o-n and s-e-r-v-a-t-i-o-n
Con-ser-va-tion means sur-vi-val to all the Rang-er's friends.
D.C.

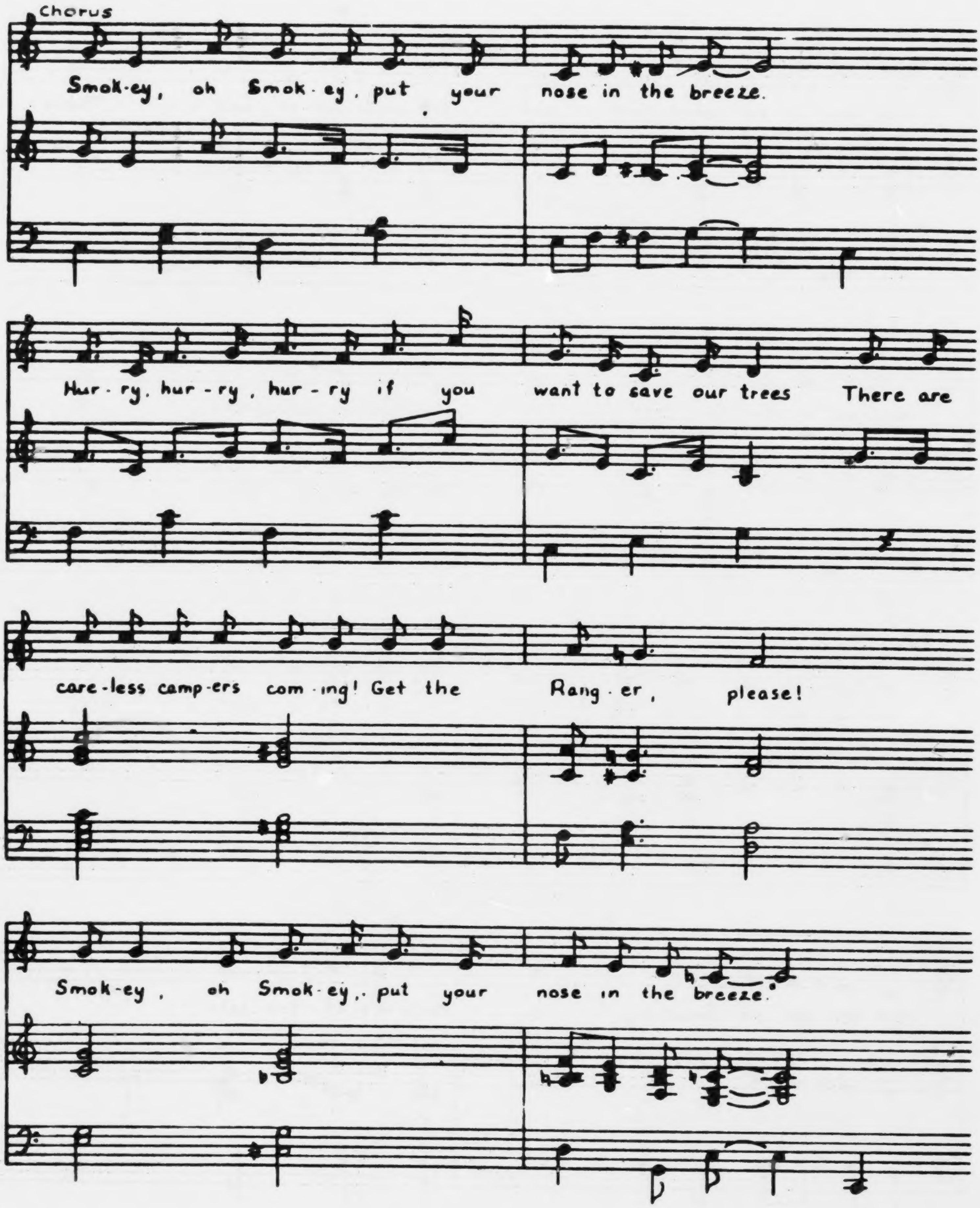
Words by Nancy T. Smuck

Music by Jean C Hoem

"Smokey, Put Your Nose in the Breeze"


Moderately
mf
mf
One
summer morning when the sun rose bright and red, The
animals were wakened by a noisy jay who said: "Wake


up, you la-zy wood folk and pop right out of bed There's
8va
8va
rit.
dan-ger in the for est The kind that we all dread! It's
rit
a tempo
real-ly most a-larm-ing and I'm in such a state We'd
a tempo
bet ter get to Smok ey be - fore it's all too late

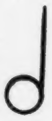

Chorus
Smok-ey, oh Smok-ey, put your nose in the breeze.
Hur-ry, hur-ry, hur-ry if you want to save our trees There are
care-less camp-ers com-ing! Get the Rang-er, please!
Smok-ey, oh Smok-ey, put your nose in the breeze.

Old MacDonald

Old MacDonald had a farm, E-I-E-I-O
And on this farm he had some woods, E-I-E-I-O
With a chop-chop here, and a chop-chop there
Here a chop, there a chop, everywhere a chop-chop
Old MacDonald had some woods, E-I-E-I-O.........

Then Old MacDonald lit a match, E-I-E-I-O
And he was careless burning trash, E-I-E-I-O
With a spark-spark here, and a spark-spark there
Here a spark, there a spark, everywhere a spark-spark
Old MacDonald burned his woods, E-I-E-I-O.........

Old MacDonald lit a smoke, E-I-E-I-O
And he was careless with his ash, E-I-E-I-O
With a spark-spark here, and a spark-spark there
Here a spark, there a spark, everywhere a spark-spark
Old MacDonald burned his farm, E-I-E-I-O



Now old MacDonald was very sad, E-I-E-I-O
He burned his woods and he burned his farm, E-I-E-I-O
With a spark-spark here and a spark-spark there
Here a spark, there a spark, everywhere a spark-spark
Old MacDonald lost it all, E-I-E-I-O.

(Slowly)
Through carelessness, he burned it all, E-I-E-I-O
Now, Old MacDonald has no farm, E-I-E-I-O.

Credits: U. S. Forest Service, verses 1 & 2; Reynolds School District #7, verses 3 & 4

All Aboard the Forestry Special !

(A Playlet by MRS. FRANCIS DOUD, Halsey, Nebraska)

CAST OF CHARACTERS

RANGER GOODSENSE, Forest Ranger
SENSIBLE SAM, Boy Scout
FIVE TREE SPOILERS:
"Careless Picnicker"
"Initial Carver"
"Souvenir Hunter"
"Fire Builder"
"Thoughtless Smoker"
A TREE IMP: "Fire"
FOUR SAFETY SPOKES IN THE STEERING WHEEL:
"Put-Out Your-Fire"
"Save-the-Birds"
"Be-Sure Your-Match Is-Out"
"Don't-Injure-Trees"
TWO PICNICKERS
CLUB PASSENGERS

SCENE: *Optional. A decorated motor truck, bus, or automobile may be used as the FORESTRY SPECIAL if the playlet is presented outdoors.*

RANGER:
This is the FORESTRY SPECIAL,
I am the Ranger, you know:
We guard the woods from danger
And see that the trees can grow.

We are bound on an adventure,
For a cause both great and good,
We go to look to the welfare
Of the country's wealth of wood--

Pine, oak, and hemlock, are our friends
And many more besides:
And nothing that harms our forests
On the FORESTRY SPECIAL rides.

My name is Ranger Goodsense,
My helper is Sensible Sam:
We guard our woods from danger,
And steer through any jam.

SAM: Yes, Sir!

RANGER: Sam, who's going to the woods today? Are all the passengers aboard?

SAM: Not yet, Sir.

RANGER: We leave for the woods in fifteen minutes.

SAM: Yes, Sir! *(Calls through cupped hands.)* All aboard that are coming to the woods. All aboard for a trip to the woods.

(Five Tree Spoilers appear, each wearing placard bearing his name-- see cast of characters. They line up, and sing the following:)

Marginal legibility of this page is due to poor original material. Better copy is not available at the time of filming . E.D.R.S.

SPOILERS:
Five little, mean little tree spoilers we,
Just as mean as we can be.
We're easily found,
We're always around,
The traces of our meanness you can see.

RANGER: Tree spoilers, hey? Well, in what way? State your aims and occupations.

SPOILERS: We are five little tree spoilers. Beware of us! You won't like us when you know us.

FIRST TREE SPOILER: I am the first little tree spoiler. I go along with the picnickers. I love to follow them. I see that there is plenty of garbage and paper left around in the woods. I see that gates are left open, so that the cows and horses get out. I'm so happy when I see tin cans lying under the trees. The only way picnickers can get rid of me is by cleaning up, but they seldom do, so I'm safe.

SECOND TREE SPOILER: I am the second little tree spoiler. Sometimes I'm the companion of the first so we're pals. I live in the pocket of the person who loves to carry a knife to carve his initials. I love to see them carved on tree trunks. They make rough places and doors through which insects can enter the living wood, and how I love to hurt a tree. The more initials I see carved in a day, the happier I am. It is said of such initial carvers, "Fools' names like their faces are often seen in public places," but they're the kind of people I like. Long live the initial carver!

THIRD TREE SPOILER: I am the third little tree spoiler. I lead the souvenir hunter. I make him see bright leaves on the tip-top branches. I force him to climb the tree for a bird's nest. The limb breaks sometimes, but that only makes me laugh. I see that he pulls the flowers by the roots and strips the bark from the trees. Sometimes I see that he chops down a whole tree just for fun. That makes me happier than anything.

FOURTH TREE SPOILER: I am the fourth little tree spoiler. I go with the camper. I watch closely while he builds a campfire. Then, when he leaves, I make him forget to put it out. I fan the sparks into flames and the forest is destroyed. How I love to see the trees turned to horrible black stumps. Ah! Sometimes my work stretches for miles. It's great fun!

FIFTH TREE SPOILER: I am the fifth little tree spoiler. I'm the one who goes with the careless smoker. I'm quite a close friend of the Fourth Tree Spoiler. We get along well together. I make him drop burning cigarette stubs near dry grass or fallen twigs, and when the fire starts I jump up and down and laugh. I'm really fond of the fool who throws away a cigarette stub without seeing that it's out. He helps me in my work.

FIVE TREE SPOILERS IN UNISON: We are five little tree spoilers. Beware of us! You will not like us when you know us! *(All attempt to enter FORESTRY SPECIAL.)*

RANGER: You rascals, boasting of the evil you do. Sam, what shall we do with them?

SAM: Throw them out, Sir.

RANGER: Very good. *(Sam and two picnickers throw them out.)*

RANGER:
I am the Forest Ranger!
My helper is Boy Scout (Sam)
We guard our woods from danger,
And steer through any jam.

SAM: Yes, Sir!

RANGER: Are all the passengers aboard, Sam?

SAM: Not yet, Sir!

RANGER: We leave for the woods in ten minutes.

SAM: Yes, Sir! All aboard that are coming. All aboard for a trip to the woods.

(Tree Imp comes up, and attempts to get into FORESTRY SPECIAL.)

TREE IMP:
I am a tree imp, beware of me,
You won't like me when you know me!
Hello, Mr. Forester! You know me, and I know you, for many a heated chase have we given each other. I am the worst little imp known to the forest; I AM FOREST FIRE. True, I can not get loose unless Careless Man or Angry Nature sets me free by kindling fire or dropping a match. But when I do get started it is hard to catch and kill me. I do a lot of damage in the woods each year, and if it were not for the Forest Ranger, I would wave my red flag over all green trees and turn the land all black and bare. Gee, what a good time I would have! *(Attempts to enter FORESTRY SPECIAL.)*

RANGER: You little mischief-maker! How dare you brag about your wicked deeds! Sam, what shall we do with him?

SAM: Throw him out, Sir!

RANGER: Very good. *(Sam and picnickers throw--casting the fire imp out with particular gusto.)*

RANGER:
I am the Forest Ranger,
My helper is Boy Scout (Sam)
We guard our woods from danger
And steer through any jam.

RANGER: Are all the passengers aboard?

SAM: Not yet, Sir.

RANGER: We leave for the woods in five minutes.

SAM: Yes, Sir! All aboard that are coming! All aboard for a big trip to the woods!

(Enter Steering Wheel Safety Spokes, each carrying placard bearing his name--see cast of characters.)

SAFETY SPOKES:
Four little safety spokes are we,
Sent by Mother Nature. See!
If you will obey us,
You'll not have to pray us
To spot the imps that harm the tree.

Oh, Forest Ranger! Mother Nature knows that you steer the FORESTRY SPECIAL. She has sent you this steering wheel so that your trip may be safe and your outing successful.

(Ranger puts wheel in place.)

FIRST SAFETY SPOKE:
At our camp I built a fire,
And I built it in the wood,
The trees all said: "He will not burn us.
At putting campfires out he's good."

SECOND SAFETY SPOKE:
Once a mean boy took his rifle,
And the birds all flew away,
For they thought that he would trifle
With their lives, the usual way.

But I know that birds have uses,
To their habits I'm not strange,
I know they check insect abuses
That in trees make such sad change.

THIRD SAFETY SPOKE:
I'm the one who's wise and plucky,
I cause never a fire, 'tis true.
When my match has done its duty
I break it carefully in two.

FOURTH SAFETY SPOKE:
If your conscience does your guiding,
And Dame Nature you would please;
If you're thoughtful, law-abiding,
You'll not strip or girdle trees.

RANGER: Thank you! Thank you all! Now I know that our trip will be successful. Sam, give the last call for the passengers.

SAM: Yes, Sir! All aboard. All aboard for the big trip to the woods.

RANGER: All ready?

SAM: Yes, Sir!

RANGER: LET'S GO!

(All picnickers enter FORESTRY SPECIAL and sing to the tune of "Sailing"--)

CHORUS:
Riding, Riding, into the woods so deep.
And many and many a mile we'll ride, e'er we come home to sleep.
Riding, Riding, to forested slope and peak,
Riding to keep the forest safe; the wealth of the woods we seek.

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service
Washington, D.C.
Revised 1965

Mr. Tobacco On Trial *

Characters:

Judge
Prosecuting Attorney
Jury (Class)
Bailiff
Defense Attorney
Defendant
Two Policemen
Witness (what do you know about tobacco?)
Witness (what does tobacco do to the body?)
Witness (confirmed the above)
Doctor (portray famous cancer specialist) tells about smoking and lung cancer
Witnesses for the defendant

Each one in the class has an assignment. After two weeks they report to the class. Instead of giving reports, put tobacco on trial. Have the prosecuting witnesses present factual information concerning tobacco. The witnesses for the defense should present material in favor of tobacco. The two attorneys should sum up the evidence, and the case be sent to the jury. Tobacco is then sentenced or released.

*Page 63, SMOKING AND HEALTH GUIDE, Superintendent of Public Instruction, Olympia, Washington

MIMENTICS OR FINGER PLAY

"FLUFFY AND BUFFY SAVE THE DAY"

There were two little squirrels with nothing to do
Fluffy was not happy and Buffy was blue
"I know," said Buffy,
"Let's look for cigarettes on the dry forest floor
And be junior forest rangers and the forest explore."

And so they joined hands and away they did scamper
To check picnic places and homes of campers.

"Look," said Fluffy,
"Here's a cigarette spark.
I wonder who is smoking
Endangering our park?"

They stamped and stamped
And would not retire
Until they prevented a big
Forest Fire

Then back to their homes with nothing as pay
Happy to know they had just saved the day.

Created by the Teacher's Curriculum Guide Committee

Smokey and the Careless Campers

NANCY T. SMUCK

NARRATOR: It is a summer morning and the sun is climbing up the sky from under its blanket of dark green hills. The forest animals and birds are coming out of their burrows and nests to greet the bright new day. Let's watch and see what's happening. Over there in a big maple tree two robins are having a bit of an argument.

MRS. ROBIN: Wake up, Mr. Robin. It's time to get busy.

MR. ROBIN: Busy doing what?

MRS. ROBIN: Busy getting twigs and leaves for our nest.

MR. ROBIN: Oh, I thought you meant something more important.

MRS. ROBIN: What's more important than building a home for your children? Now go on. *(Pushes Mr. Robin out of nest.)* Shake your lazy wings and get busy.

MR. ROBIN: *(Looks back up and shakes his head.)* Sometimes I wish you weren't such an early bird.

MRS. ROBIN: Robin!

MR. ROBIN: Sorry. I'm going, but first I'm going to get some breakfast. *(Mr. Robin leaves and Mrs. Robin hops about gathering twigs and leaves for their uncompleted nest.)*

SQUIRREL: *(Squirrel enters carrying a large nut. He turns it over and over in his paws and then pretends to crack it and eat it. Every so often he stops and listens, and then goes on eating.)*
What a morning! *(Looks all around.)* Not a cloud in the sky. What a day for storing nuts! I'd better find a storage bin in one of these trees. *(Scampers behind a tree.)*

RABBIT: *(Hops on stage, wiggles nose, and flops ears. He stops to nibble grass, listens when deer poke their heads out from behind some bushes. The rabbit jumps and then hops off to hide.)*

FIRST DEER: I think we've used up all of the food here. Let's go look in another place.

SECOND DEER: If only those campers hadn't caused such a bad fire last year, we'd have more places to get food right now.

FIRST DEER: How can people make such messes and be so careless?

BLUE JAY: *(Comes in, terribly upset.)* Wake up, you lazy wood folk, and pop right out of bed. There is danger in the forest--the kind that we all dread. Ohhh, dear, oh dear, ohhhh dear!

MRS. ROBIN: *(Hops down and comes to blue jay, and other animals gather around him.)* We are awake, Blue Jay. What are you so excited about? *(Mr. Robin returns with others.)*

BLUE JAY: It's really most alarming, and I'm in such a state. I'm so upset. We must do something before it's too late.

SQUIRREL: Calm yourself and tell us what you are talking about.

BLUE JAY: They're here again!

FIRST DEER: Who is here?

BLUE JAY: Those awful people. I mean people like the careless ones that came last year.

SECOND DEER: You mean there are some careless campers in the forest?

BLUE JAY: Yes, yes! Ohhhh, what shall we do?

MRS. ROBIN: We have to think of something.

SECOND DEER: Let's make so much noise we'll frighten them away.

BLUE JAY: That might work.

SQUIRREL: I could throw nuts on top of their heads.

MRS. ROBIN: Don't be rediculous. That won't work. We need help.

MR. ROBIN: I know. I'll get Smokey.

BLUE JAY: I should have done that right away.

MR. ROBIN: Yes, we better get Smokey before it's too late.

MRS. ROBIN: Hurry, Mr. Robin, go get Smokey. Hurry, hurry, hurry! *(She pushes him across the stage.)*

MR. ROBIN: I'm going. I'm going. *(Mr. Robin goes off stage, left, and the animals hide as sounds of campers can be heard off stage, right.)*

NARRATOR: Just as Blue Jay said, there are some careless campers in the forest and here they come. With them is one camper who knows the right thing to do, but, as you will discover, no one pays any attention to him.

EDDIE: This looks like a good place to camp.

PETE: Yes, it looks like someone has used this spot before.

CARL: Let's get a fire going and fix something to eat. Boy, am I hungry!

JOHN: So am I. Whoever had the idea of climbing way up here before breakfast on a hot summer morning?

EDDIE: Poor Johnnie didn't get his beauty sleep. Let's get a fire going. I'm hungry.

PETE: Don't you think we ought to pitch our tent and find a safe place for our fire before we fix our food?

CARL: Well, if someone else has used this spot, it's good enough for me.

PETE: Yes, but look at all these dry needles, twigs, and leaves. Campers and picnickers are supposed to clear the ground all the way down to the soil before starting a campfire. *(Goes about business of clearing the ground.)*

JOHN: What a fussy camper. You sound like a worry bird to me.

PETE: You ought to move the fire this way a little, too. You're too close to that fallen tree.

CARL: Boy, would you listen to him. Where did you get all of these bright ideas?

PETE: Aw, quit it, boys. I know a ranger and he says you should always build a small fire and never build any fire right under a tree or against a fallen tree.

EDDIE: Let's stop the lecture. This place looks OK to me.

CARL: Sure, all we want is a fire to fry a few eggs and some bacon.

JOHN: And roast marshmallows.

EDDIE: Yes, and roast--do WHAT?

JOHN: Roast marshmallows.

EDDIE: For breakfast?

JOHN: Sure, why not? *(Starts breaking down branches of young trees. They won't break; so he pulls them up, roots and all.)*

PETE: Watch what you're doing! I't all right to use what wood you need, but don't destroy little trees that way.

JOHN: Don't be so picky! *(In the meantime Eddie and Carl have finished building an imitation fire and begin opening cans of juice, packages of rolls, etc. They throw all of the cans, wrappers, etc., in every direction.)*

EDDIE: I'm stuffed. I don't care what the rest of you fellows do, but I'm going to get some sleep. *(He lies down with his head on a rolled-up sleeping bag.)*

JOHN: Now who's taking his beauty sleep? I'm going to roast these marshmallows. *(Goes about business of roasting as Carl finishes cooking eggs in a frying pan.)*

CARL: Marshmallows for breakfast. That's awful. Well, you go right ahead with your sticky stuff. I'm going to join Eddie. *(Rolls out bag and flops on his stomach.)*

PETE: Look out! That marshmallow is on fire!

JOHN: Sure, that's the way I like them. The blacker the better. *(Waves stick around in the air.)* This one looks a little too black. Oh, well--. *(Throws the whole thing toward the back of the stage.)* Move over, Sleeping Beauty. *(Tries to put his head on Eddie's sleeping bag.)*

EDDIE: Hey, quit that! Go get your own sleeping bag. *(John goes over to his own sleeping bag and settles himself.)*

BLUE JAY: Look! That stick is still on fire! *(Other animals creep out to look at the stick.)*

SQUIRREL: I'd try to put it out, but I'm scared!

MRS. ROBIN: Oh, if Mr. Robin would only come with Smokey!

FIRST DEER: Here he comes. What if he couldn't find Smokey!

MR. ROBIN: *(All out of breath.)* What a hunt I've had. I thought I'd never find him.

SMOKEY: It looks as though I got here just in time. There's a stick smoldering over there. Would you look at this mess. What campers!

SMOKEY: *(Goes over and stamps on flaming stick and surrounding area. He picks up stick and brings it over and lays it on the campfire.)* Just wait until these fellows wake up. I'll have a few things to say to them. They ought not to be sleeping when they are endangering the lives of others. Grrrrrrrrr, wake up, careless campers! *(Shakes Carl by the foot.)*

CARL: *(Raises himself slowly and looks in amazement at Smokey. He rubs his eyes and then shakes John.)* Hey, wake up! Wake up! Bear! Bear!

JOHN: What's the matter? Why don't you let a fellow--. *(Pauses when he sees Smokey.)* Do you see what I see, or did I eat too many marshmallows? Eddie, Pete, wake up.

SMOKEY: *(As the others sit up and look at Smokey--.)* It's time you all woke up to what you're doing. If I hadn't come by just now, that burning marshmallow stick could have endangered your life and that of all the animals, trees, and people in the forest. When trees are destroyed, rain washes away topsoil. Tree roots help prevent river and stream banks from washing into and muddying the water.

JOHN: I'm sorry, Smokey. It's mostly my fault. Pete tried to tell us to pick a safe site for a campfire. I know it was crazy to throw that flaming stick.

EDDIE: Come on, fellows, let's start cleaning up the place. Wow, when I think what might have happened! *(All four campers start cleaning up the campsite.)*

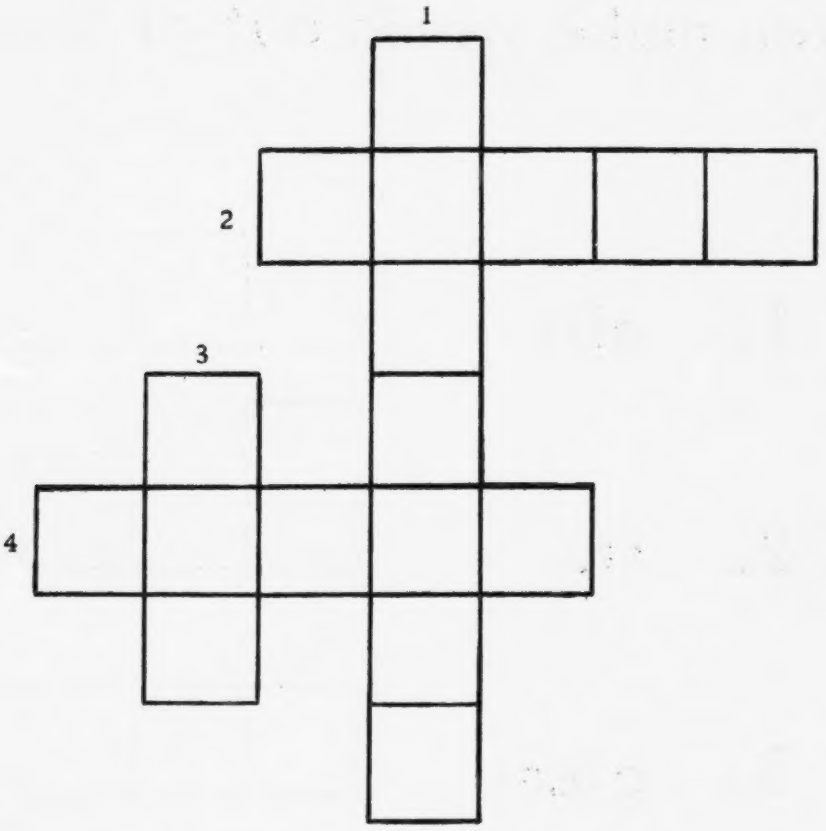
PETE: Thank you, Smokey.

NARRATOR: When you and your family go camping, remember to build safe fires. Always be sure your fire is out--dead-out--before you leave it. Keep your fires small. Keep your camp clean, both for yourself and the campers who follow you.

Entire cast assembles to sing one of the Smokey Bear songs included in this unit. We suggest you ditto the words so that the audience as well as the cast may join in the songs.

Name________________________________

ABOUT SMOKING!



1. _ _ _ _ _ _ _ is not a good thing to do.

2. The _ _ _ _ _ has poisons in it.

3. It is very _ _ _ for your body.

4. It is a hard _ _ _ _ _ to stop.

Reynolds School District #7, July 1967.

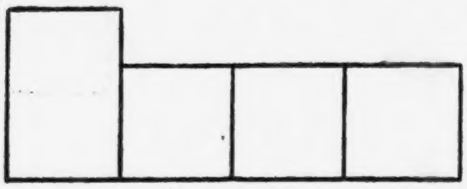
Recommended for Grade 1

Name__________________________ Date____________

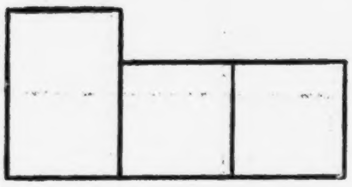
MIX-UP!

Can you make words out of these letters? Try it.

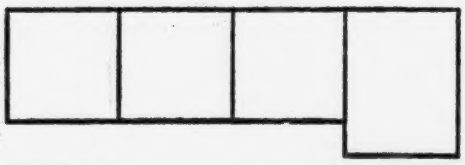
1. efir



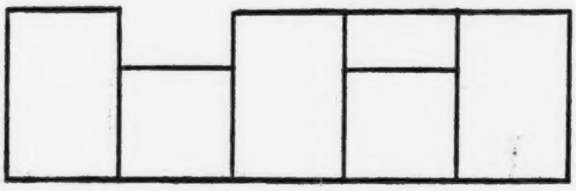
2. rta



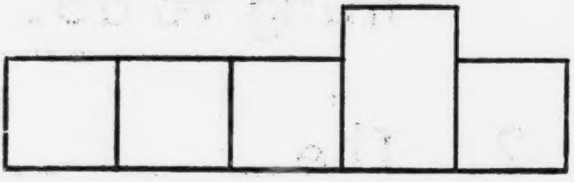
3. gosm



4. tahbi



5. ksemo



Reynolds School District #7, July 1967.

Recommended for Grade 1

Name__________________________ Date_____________

STACK THE BLOCKS!

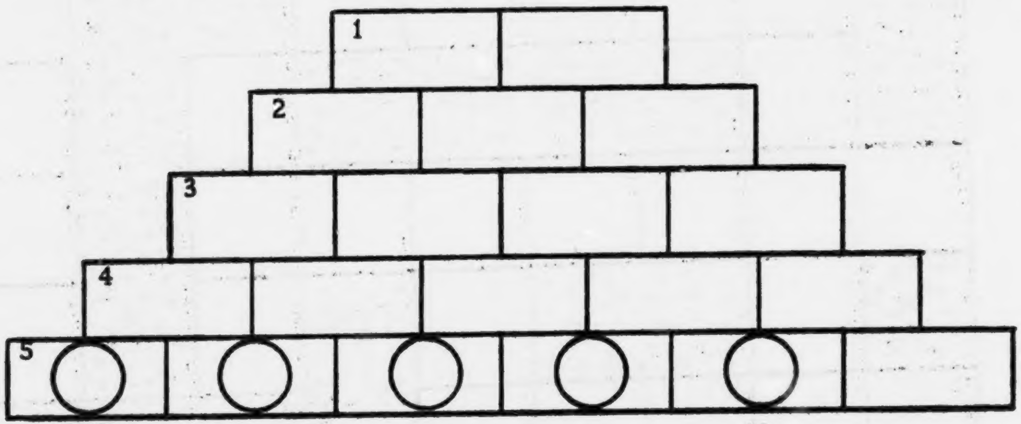
1. Is smoking good for you?

2. Something harmful in cigarette smoke.

3. Be careful with________________. Do not leave it until it is out.

4. Smoking becomes a________________.

5. Our friend is________________the bear. He was saved from a big forest fire.



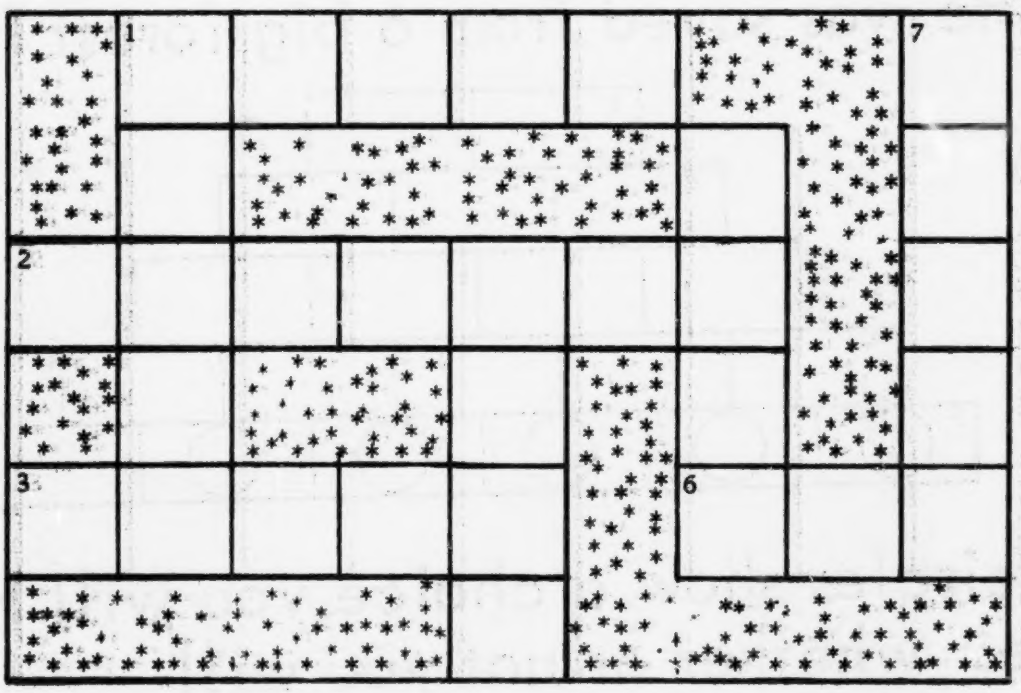
The circles show a choice you will have to make: whether or not you will

___ ___ ___ ___ ___.

A HABIT THAT IS VERY HARMFUL!

Across
1. You __________ with your nose.
2. Cigarettes are made of ______________ .
3. When to start smoking
6. Something harmful in the smoke

Down
1. To ______________ is very harmful to your body.
4. Take good ____________ of your health.
5. ________________ of a pack of cigarettes is 25¢.
7. Something to smoke



DANGER!

Across
1. A habit harmful to your health
3. Something harmful in the smoke
5. Fatal disease usually caused by cigarette smoking
6. A mixture of smoke and fog
7. Part of body speeded up by smoking

Down
2. Cigarettes are made of ______________ .
4. What do you do when you smoke?
5. Your lungs are in your ______________ .

heart

chest

tobacco

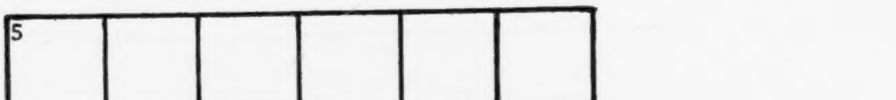
tar

inhale

smoking

cancer

smog



Reynolds School District #7, July 1967.

Recommended for Grade 2

Secret Code

Name ______________________ Date ____________________

A	B	C	D	E	F	G	H	I	J	K	L
3	6	9	12	15	18	21	24	27	30	33	36
M	N	O	P	Q	R	S	T	U	V	W	X
39	42	45	48	51	54	57	60	63	66	69	72
Y	Z										
75	78										

Messages

1. 39 3 42 75   18 27 54 15 57   3 54 15

   9 3 63 57 15 12   6 75   9 3 54 15 36 15 57 57

   57 39 45 33 15 54 57

2. 60 24 15 54 15   3 54 15   48 45 27 57 45 42 57

   27 42   9 27 21 3 54 15 60 60 15   57 39 45 33 15

Name______________________ Date____________

SCRAMBLED EGGS that are not good for you.
The big letter will come first.

1. ⓡ ⓐ ⓒ Ⓒ ⓝ ⓔ _ _ _ _ _ _

2. ⓐ Ⓣ ⓡ _ _ _

3. ⓔ Ⓢ ⓞ ⓜ ⓚ _ _ _ _ _

4. ⓞ ⓞ Ⓟ ⓝ ⓢ ⓘ _ _ _ _ _ _

5. ⓖ ⓡ Ⓒ ⓐ ⓘ _ _ _ _ _

6. ⓒ ⓞ Ⓣ ⓑ ⓞ ⓐ ⓒ _ _ _ _ _ _ _

7. ⓛ Ⓕ ⓡ ⓘ ⓔ ⓣ _ _ _ _ _ _

8. ⓘ ⓞ ⓒ ⓣ ⓔ ⓝ ⓘ Ⓝ _ _ _ _ _ _ _ _

9. ⓜ Ⓐ ⓞ ⓐ ⓜ ⓝ ⓘ _ _ _ _ _ _ _

10. ⓛ Ⓢ ⓔ ⓜ ⓛ _ _ _ _ _

Scramble your first name!

Reynolds School District #7, July, 1967

Recommended for Grades 2-3

A BAD HABIT!

ACROSS

1. Using this can ruin your lungs
3. One hat
8. Opposite of off
11. Opposite of yes
12. I will go_____the store
13. I will_____to keep good health
16. It comes from fire
17. A_________has 20 cigarettes

DOWN

1. Smoking will________your money and your life
2. Nickname for a cigarette
4. Something you do over and over again
5. Something harmful in smoke
6. The number that comes after nine
7. Opposite of bottom
9. Smoking is_______a good habit
10. To let out air
14. Smoking is a__________to your life
15. Smoke is very__________________.

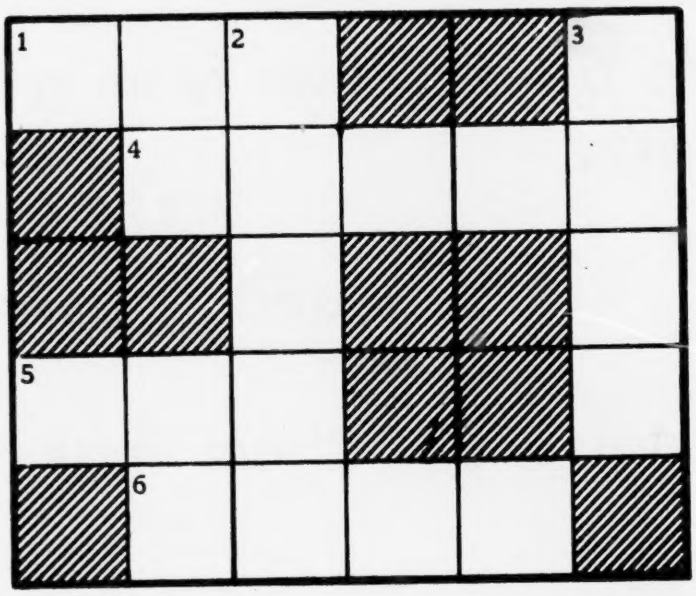
▨	▨	2	▨	5	▨	8	9	▨
▨	▨	3	4		6	▨		▨
1						7		10
	▨	▨		▨	11		▨	
	▨	▨		▨	▨		▨	
12		▨	13	14		▨	▨	
▨	▨	▨	▨		▨	15	▨	
▨	▨	▨	▨	16				
▨	17				▨		▨	▨

Reynolds School District #7, July 1967.

Recommended for Grades 2-3

NAME ______________________________

No Smoking Please !



DOWN

2. Get ___ ___ ___ ___ ___; don't start.
3. You can ___ ___ ___ ___ people that smoking hurts your lungs.

ACROSS

1. My father ___ ___ ___ a smoker, but he stopped.
4. To ___ ___ ___ ___ ___ is really very harmful to you.
5. Smoke has ___ ___ ___ in it.
6. It is hard to ___ ___ ___ ___ this habit.

Reynolds School District #7, July 1967.

Recommended for Grades 2-3

Name______________________________ Date__________

TOBACCO

The tobacco plant grows from a _ _ _ _.
It has flowers.

The _ _ _ _ _ _ _ are used to make cigarettes.

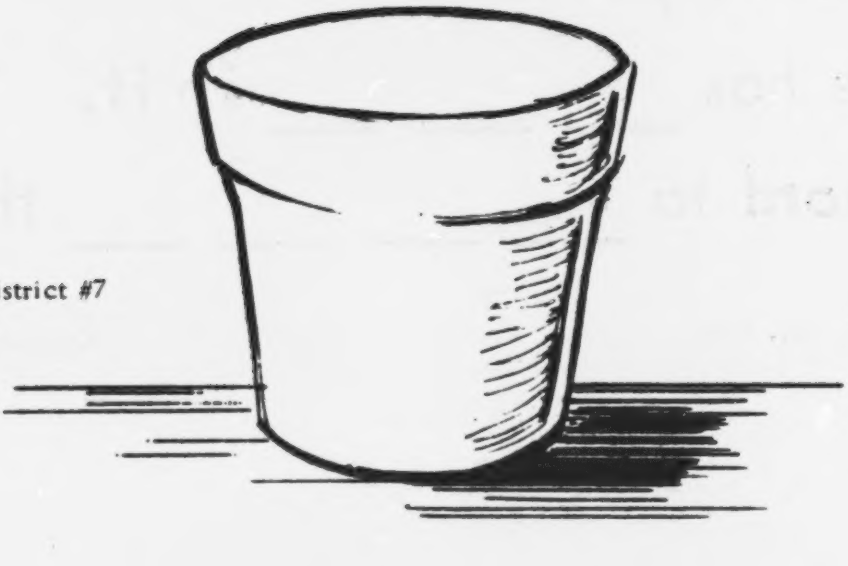
They have poisons in them that can harm our

_ _ _ _.

Draw a tobacco plant growing in this flower pot.
Show the stem, leaves, flowers, and buds.
Color it.

Reynolds School District #7
July, 1967

Recommended for Grades 2-3



WHAT MESSAGES
DO THE MISSING LETTERS TELL?

1. DI___EASES
___ALIGNANCY
P___ISONS
SMO___E
HAB___T
ARSE___IC
___ASES

AD___ICTION
C___NCER
___ICOTINE
COU___H
___MPHYSEMA
NE___VOUSNESS
___MOG

_ _ _ _ _ _ _   _ _ _ _ _ _ _

____

2. LUN___S
___MPHYSEMA
NICO___INE
MUCU___
___ONOXIDE
G___SES
CO___ONARY
___OBACCO

A___DICT
SM___G
BE___IGN
FIL___ERS

DE___TRUCTION OF CELLS
HABI___S
C___NCER
CH___ONIC
___ARS

_ _ _   _ _ _ _ _   _ _   _ _ _   _ _ _ _ _!

Reynolds School District #7, July 1967

Recommended for Grades 3-4

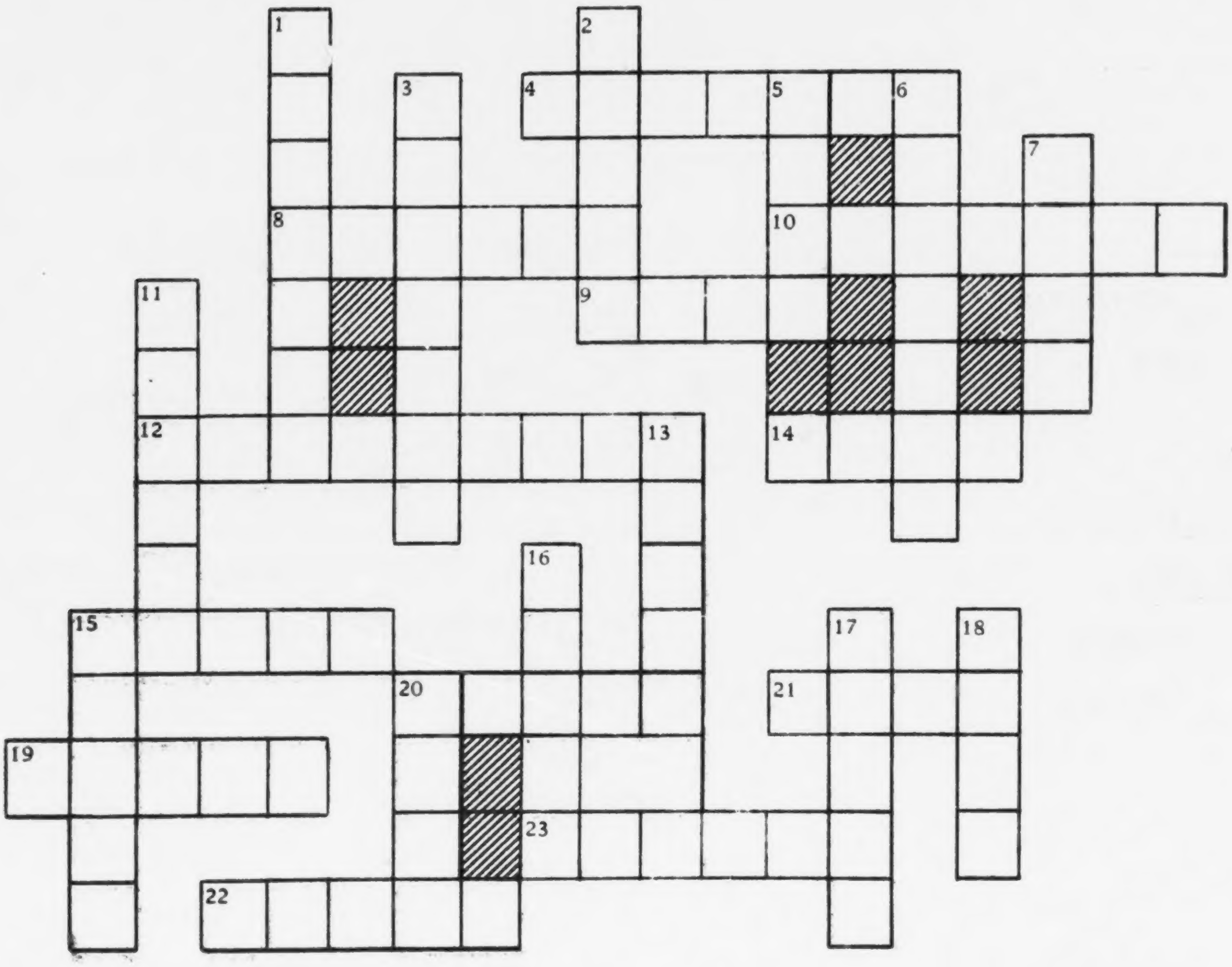
HELP, FIRE!

ACROSS

4. Small axe firemen use
8. Firetruck
9. Firemen__________ on the truck
10. A common cause of fire
12. A fireman's job is____________(risky)
14. ____________the Fire Station first!
15. Large group of people
19. Something to smoke
20. A fire!
21. It can destroy all we have.
22. Noise made by fire bell
23. To get out

DOWN

1. Man whose job is putting out fires
2. Used to put out fires
3. A fireman is sometimes called a fire _______________
5. Water comes through the____________
6. A fire causes_______________(worry, bother)
7. Indians smoked a__________
11. Used for climbing
13. A sure sign of fire
15. Head of fire department is the_______
16. A fireman must be_____________
17. Horn on fire truck
18. Call for___________
20. Fires_____________



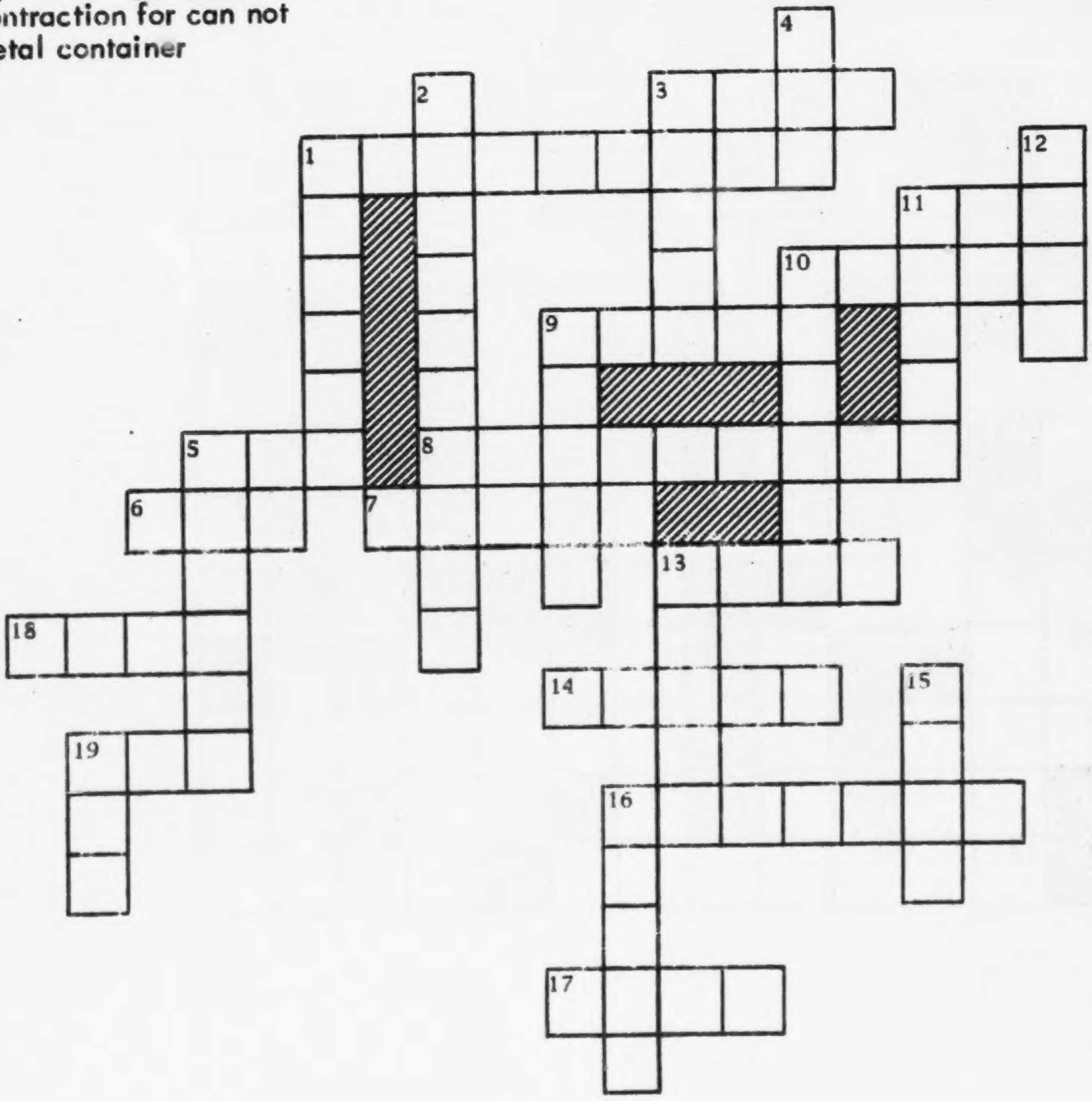
WORDS THAT BEGIN WITH "C"

ACROSS

1. Kind of puzzle this is
3. The ________ of a pack of cigarettes is 25¢.
5. Automobile
6. Good house pet
7. Stogie
8. Habit forming device used in smoking
9. Girl's name
10. To get around on hands and knees
11. What a baby says
13. Pack your suit ________ for the trip.
14. Our body is made of millions of these.
16. A big alpha bet letter is a ________
17. A yellow vegetable
18. Contraction for can not
19. Metal container

DOWN

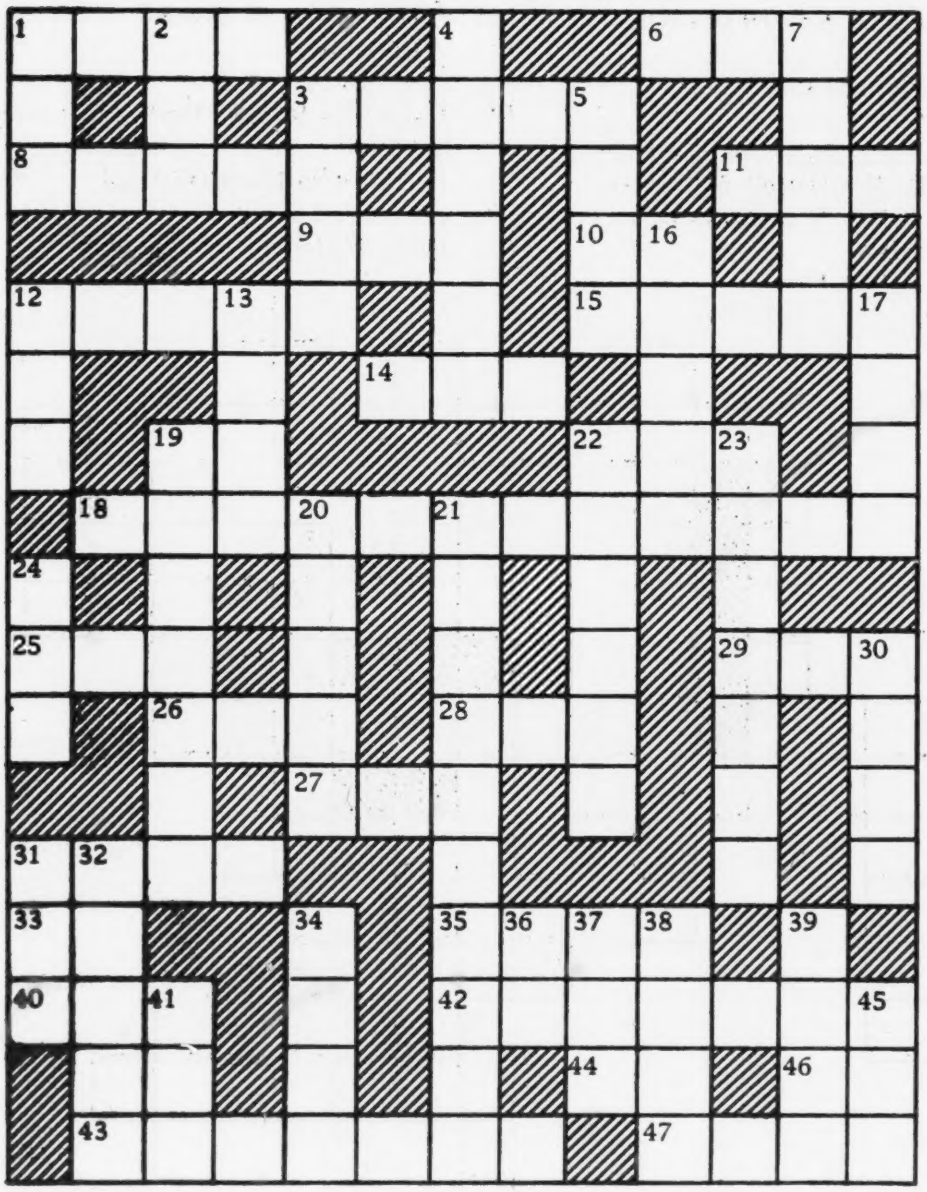
1. Disease usually caused by smoking
2. Radio or T.V. ad
3. Red is a ________
4. Crazy drug
5. Cardboard container
9. Bigger, brown device to smoke
10. Prickly kind of plant
11. Wire rope
12. Not hot
13. Hair-like brooms that clean air we breathe
15. Person who prepares food
16. Girl's name
19. Kind of fish



[illegible] School District #7, July 1967.

Recommended for Grade 4

CONSERVATION!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Reynolds School District #7, July 1967

Recommended for Grades 4-5

CONSERVATION!

ACROSS

1. It is fun to plan a ______
3. Things that burn in a forest
6. Bone which holds our teeth
8. A sure sign of fire
9. To drink by small amounts
10. An exclamation
11. Nothing
12. Use ________ to change the color
14. Ocean
15. Lakes are full of ______
18. To use wisely--not wasting
22. Abbreviation for "cost, insurance, freight"
25. Tool for chopping wood
26. Male offspring
27. Pronoun for girl
28. To feel remorse
29. Something harmful in cigarette smoke
31. Tuna, salmon and cod are ______
33. Nickname for advertisement
35. Used to catch something
40. ________ busy!
42. Breathed in
43. A harmful habit
44. One
46. Abbreviation for active ingredient
47. Rubber casing on wheel

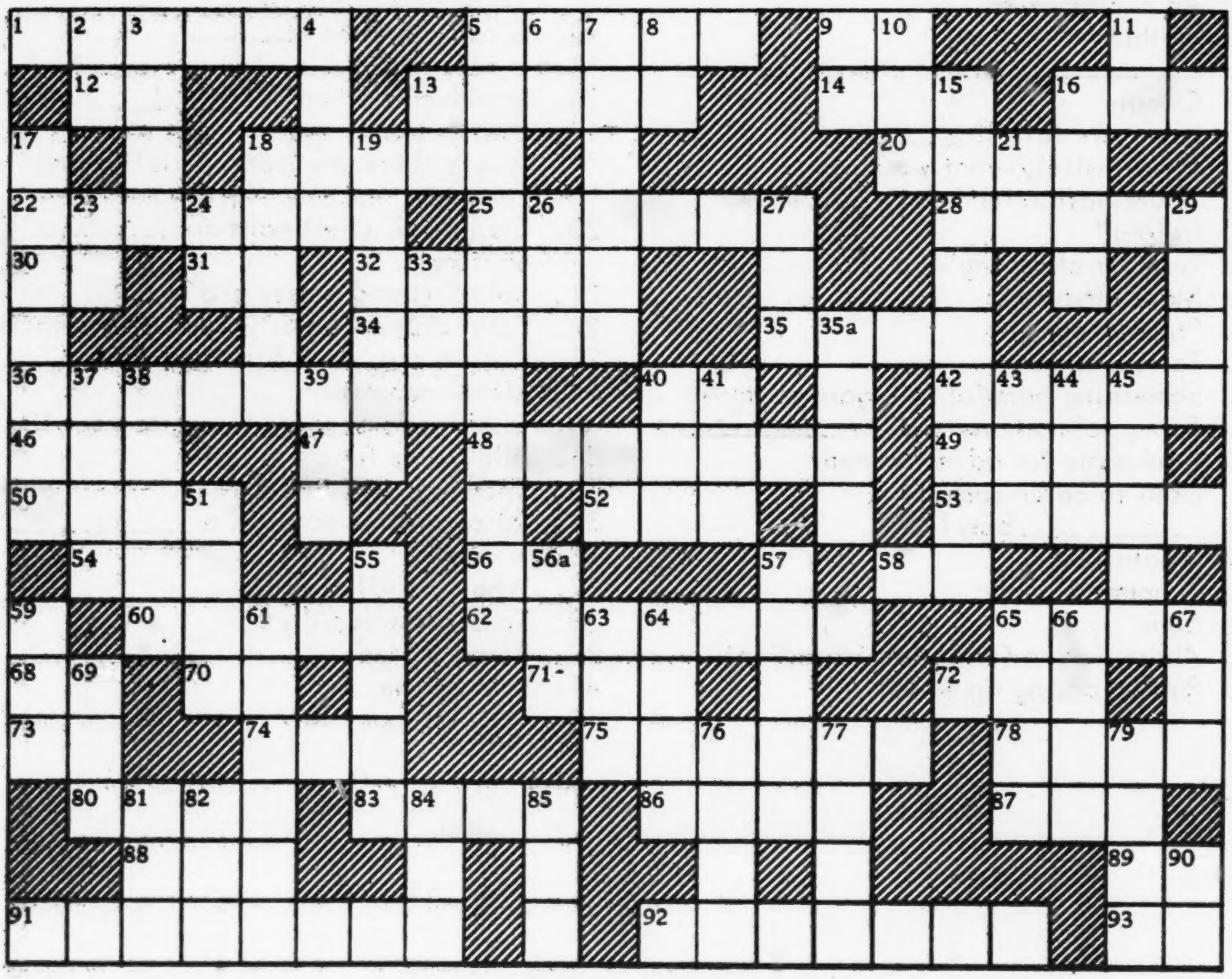
DOWN

1. Colorless vapor
2. What cows say
3. You study hard to pass it
4. A group of persons
5. Frozen rain
7. Color of a cigarette
12. A cat is a good ______
13. Lunchtime
16. Smoking is a harmful ______
17. Destruction
19. Where there are trees, wildlife and campers
20. Cough and chest pain are ______ of illness
21. Relaxing and games and sports
22. Fatal disease usually caused by smoking
23. Cotton ends on cigarettes
24. Metal container
30. Smoking is a ________ to your life
31. Nickname for a cigarette
32. Thoughts
34. 20 cigarettes come in a ________
36. A nurse
37. What the villain said
38. To breathe rapidly
39. Being scared
41. Boy's name
45. To lose your life

Reynolds School District #7, July 1967.

HEALTH AND TOBACCO CORRELATION

CROSSWORD PUZZLE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34 35 35a
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88 89 90
91 92 93

Reynolds School District #7, July 1967 — Recommended for Grades 4-5

HEALTH, TOBACCO CORRELATION

CROSSWORD PUZZLE

ACROSS

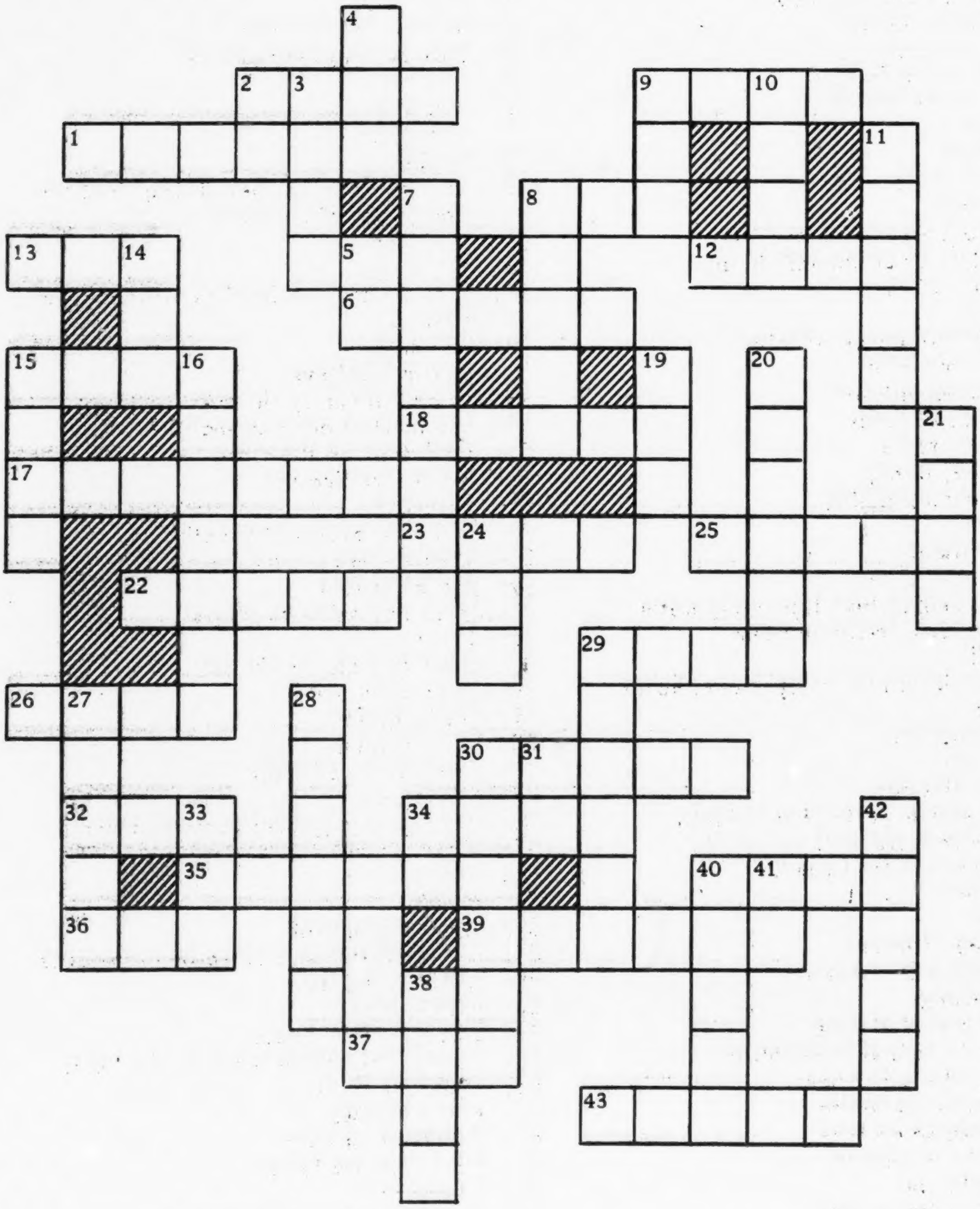
1. Review, study
5. minute hairs in alveoli
9. Pronoun, neuter
12. Per ________
13. take out of food
14. temporary custom
16. Many
18. Prettier
20. Make angry
22. to break
25. Disease caused by smoking
28. Mixture of compounds in air
30. Prefix for in
31. either
32. temporary peace offering
34. haul into court
35. damages; injuries
36. disease of lungs
40. form of to be
42. plague, annoy
46. just about nothing
47. either
48. air passage
49. ________China
50. What people take from a cigarette
52. to be born; feminine name
53. Smells
54. Abbreviation for Every Non-Smoker Order
56. Exclamation
58. Not out
60. Now; this day
62. Body system pertaining to brain
65. Go ahead; not pull
68. Contraction for I would
70. to make
71. regret
72. method of travel
73. ancient god of Egypt
74. to immerse
75. short period of time
78. Must do to find information
80. a narcotic substance
83. to restore to health
86. air passage on face
87. to make a mistake
88. a single unit
89. Pronoun for yourself
91. The burden of physical or mental distress
92. related to the body senses also
93. a part of speech

Reynolds School District #7, July 1967
Recommended for Grades 5-6

DOWN

2. Pronoun
3. to harvest
4. Belongs to other one
5. Body system; heart, blood
6. Pronoun
7. inclined
8. verb to be
9. maybe
10. Odorous liquid gotten through distillation of organic material
11. therefore
13. is
15. Body system that handles utilization of food
16. Not more
17. To make believe
18. To gain favor by flattery
19. The limit of one's strength
21. Sixth tone on the scale
23. Prefix meaning not
24. infinitive
26. One that excels at something
27. a male sheep
29. bottom of feet
33. force something by impact
35a. Open
37. Dig into wet, marshy soil
38. Tobacco is one
39. Earth, ground
40. Frozen water
41. Pronoun for a female
43. Final ________
44. Much________about nothing; turmoil
45. Open wounds
51. well
55. glands
56a. Female (pronoun)
57. Sticky substance created by membranes
59. Mixture of gases
61. evades issues
63. Liquor from molasses
64. Vessel that carries blood to the heart
65. Free from taint
66. One who uses
67. Past tense of have
69. Nickname for father
76. To notice
77. Aromatic drinks made from leaves
79. prepares oneself for action
81. Eggs of a fish still in a membrane
82. Abbr. for United Nations Service
84. Make a living with difficulty
85. Not high
90. two vowels

TOBACCO DAZE!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Reynolds School District #7, July 1967

Recommended for Grades 5-6

TOBACCO DAZE!

ACROSS

1. He was saved from a forest fire
2. You should____________laws
6. Something you do over and over again
8. __________ smoke?
9. A _______ of cigarettes costs money

12. Habits are hard to ________
13. Nickname for a cigarette
15. Fire causes _______
17. Harmful poison in cigarettes
18. Forests are full of ________
22. Larger device to smoke
23. Smoking is a __________ to your life
25. This puzzle is printed on
26. Mixture of smoke and fog
29. Cause of smoke
30. Tiny brooms that sweep air passages in our bodies
32. A poison in cigarette smoke
34. To breathe fast
35. Gas in air we breathe
36. Not cold
37. We need to breathe fresh ________
38. Physical education
39. Cardboard container
40. We must take ________ of our health
43. Left from a fire

DOWN

2. short word that means alright
3. Smokey is a _______
4. It opens a door
5. An exclamation
7. Cost of pack of cigarettes
8. Color of a cigarette
9. You must _______ the price for smoking
10. Cigarettes _______ both money and health
11. Not sad
14. There is hot ________ in smoke
15. Organ for breathing
16. Habit that is harmful to your health
19. Fad drug used for hallucinations
20. To breathe in
21. What a fire does
24. You write with it
27. Used to start a fire
28. Voice box
29. Cotton tip on cigarette
30. Fatal disease usually caused by smoking
31. Not out
33. To spoil
38. Indians smoked a ________
40. Many smokers get a _________
41. ______ apple a day keeps the Doctor away!
42. When to start smoking

Reynolds School District #7, July 1967

ANSWER KEYS

Danger

5 C	A	N	C	E	R			
H								
E		2 T			4 I			
1 S	M	O	K	I	N	G		
T	▨	B			H			
	3 T	A	R		A			
		C			L			
		C		7 H	E	A	R	T
6 S	M	O	G					

A Habit That is Very Harmful!

▨	S	M	E	L	L	▨	▨	C
▨	M	▨	▨	▨	▨	C	▨	I
T	O	B	A	C	C	O	▨	G
▨	K	▨	▨	A	▨	S	▨	A
N	E	V	E	R	▨	T	A	R
▨	▨	▨	▨	E	▨	▨	▨	▨

Scrambled Eggs

1. cancer
2. tar
3. smoke
4. poison
5. cigar
6. tobacco
7. filter
8. nicotine
9. ammonia
10. smell

A Bad Habit!

▨	▨	2 F	▨	5 T	▨	8 O	9 N	▨
▨	▨	3 A	4 H	A	6 T	▨	O	▨
1 C	I	G	A	R	E	7 T	T	10 E
O	▨	▨	B	▨	11 N	O	▨	X
S	▨	▨	I	▨	▨	P	▨	H
12 T	O	▨	13 T	14 R	Y	▨	▨	A
▨	▨	▨	▨	I	▨	15 H	▨	L
▨	▨	▨	▨	16 S	M	O	K	E
▨	17 P	A	C	K	▨	T	▨	▨

Stack the blocks!

1 N O
2 T A R
3 F I R E
4 H A B I T
5 S M O K E Y

MIX-UP!

1. fire
2. tar
3. smog
4. habit
5. smoke

About Smoking!

			1 S			
		2 S	M	O	K	E
			O			
	3 B		K			
4 H	A	B	I	T		
	D		N			
			G			

No Smoking, please!

1 W	A	2 S	▨	▨	3 T
▨	4 S	M	O	K	E
▨	▨	A	▨	▨	L
5 T	A	R	▨	▨	L
▨	6 S	T	O	P	▨

TOBACCO

1. seed
2. leaves
3. body

SECRET CODE:

1. Many fires are caused by careless smokers.
2. There are poisons in cigarette smoke.

WHAT MESSAGES DO THE MISSING LETTERS TELL?

1. Smoking dangers
2. Get smart! Don't start.

ANSWER KEYS

CONSERVATION CROSSWORD PUZZLE

ACROSS

1. game
3. trees
6. jaw
8. smoke
9. sip
10. oh!
11. nil
12. paint
14. sea
15. water
18. conservation
22. cif
25. axe
26. son
27. she
28. rue
29. tar
31. fish
33. ad
35. trap
40. get
42. inhaled
43. smoking
44. an
46. ai
47. tire

DOWN

1. gas
2. moo
3. test
4. people
5. snow
7. white
12. pet
13. noon
16. habit
17. ruin
19. forests
20. signs
21. recreation
22. cancer
23. filters
24. can
30. risk
31. fag
32. ideas
34. pack
36. RN
37. aha!
38. pant
39. fear
41. Tim
45. die

HELP ! FIRE !

ACROSS

4. hatchet
8. engine
9. ride
10. smoking
12. dangerous
14. call
15. crowd
19. cigar
20. blaze
21. fire
22. clang
23. escape

DOWN

1. fireman
2. water
3. fighter
5. hose
6. trouble
7. pipe
11. ladder
13. smoke
16. brave
17. siren
18. help

WORDS THAT BEGIN WITH "C"

ACROSS

1. crossword
3. cost
5. car
6. cat
7. cigar
8. cigarette
9. Carla
10. crawl
11. coo
13. case
14. cells
16. capitol
17. corn
18. can't
19. can

DOWN

1. cancer
2. commercial
3. color
4. L.S.D.
5. carton
9. cigar
10. cactus
11. cable
12. cold
13. cilia
15. cook
16. Carol
19. cod

Reynolds School District #7, July 1967.

HEALTH, TOBACCO CORRELATION

CROSSWORD PUZZLE KEY

ACROSS

1. survey
5. cilia
9. it
12. se
13. bites
14. fad
16. lot
18. cuter
20. rile
22. rupture
25. cancer
28. gases
30. en
31. or
32. truce
34. haled
35. mars
36. emphysema
40. is
42. tease
46. nil
47. or
48. trachea
49. Indo
50. drag
52. nee
53. odors
54. ENO
56. oh
58. in
60. today
62. nervous
65. push
68. I'd
70. do
71. rue
72. bus
73. ra
74. dip
75. minute
78. read
80. drug
83. heal
86. nose
87. err
88. one
89. me
91. pressure
92. sensory
93. so

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DOWN

2. us
3. reap
4. your
5. circulation
6. it
7. leaned
8. is
9. if
10. tar
11. so
13. be
15. digestion
16. less
17. pretend
18. curry
19. tether
21. la
23. un
24. to
26. ace
27. ram
29. sole
33. ram
35a. ajar
37. mire
38. plant
39. sod
40. ice
41. she
43. end
44. ado
45. sores
51. good
55. lymph
56a. her
57. mucus
59. air
61. dodges
63. rum
64. vein
65. pure
66. user
67. had
69. dad
76. note
77. teas
79. arms
81. roe
82. UNS
84. eke
85. low
90. eo

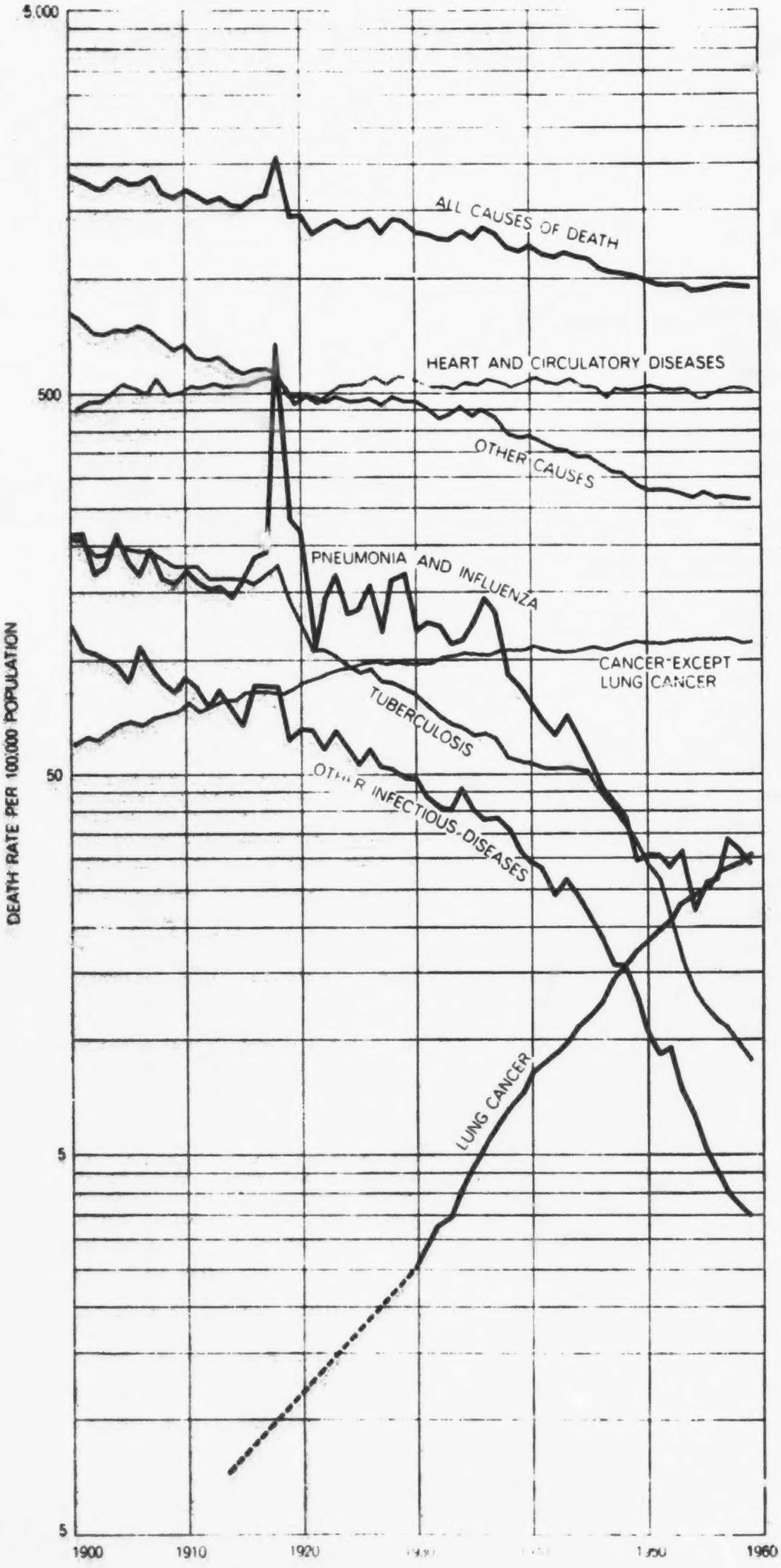
ANSWER KEY: TOBACCO DAZE!

ACROSS

1. Smokey
2. obey
6. habit
8. why
9. pack
12. stop
13. fag
15. loss
17. nicotine
18. trees
22. cigar
23. risk
25. paper
26. smog
29. fire
30. cilia
32. tar
34. pant
35. oxygen
36. hot
37. air
38. p.e.
39. carton
40. care
43. ashes

DOWN

2. ok
3. bear
4. key
5. oh!
7. quarter
8. white
9. pay
10. cost
11. happy
14. gas
15. lung
16. smoking
19. L.S.D.
20. inhale
21. burn
24. ink
27. match
28. larynx
29. filter
30. cancer
31. in
33. rot
38. pipe
40. cough
41. an
42. never



RISE IN LUNG CANCER DEATHS runs counter to the 60-year downtrend in total death rates among U.S. men. In 1959 lung cancer accounted for 29,335 deaths. Colon and rectal cancers, next in order of frequency, caused 19,129 male deaths. The nearly steady death rate for heart and circulatory diseases conceals a significant rise in coronary artery disease, which is offset by a long-term decline in other forms of heart disease. Curves are age-adjusted so that death rates are not spuriously shifted by changing age composition of the population.

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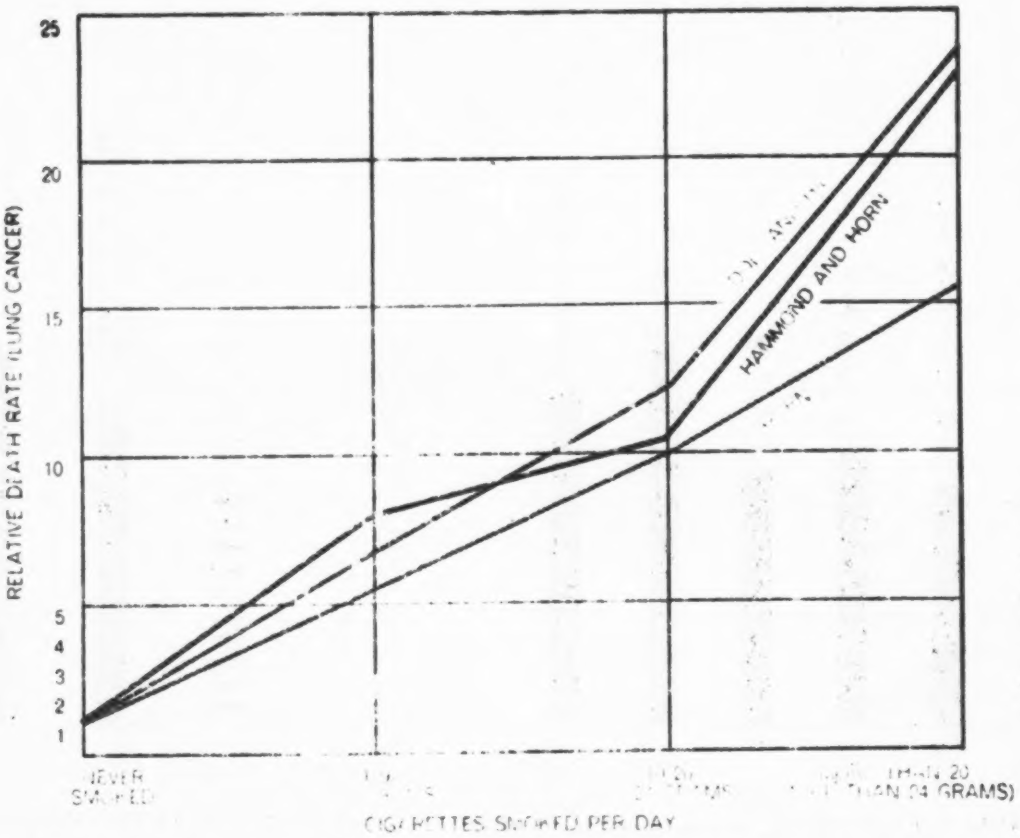
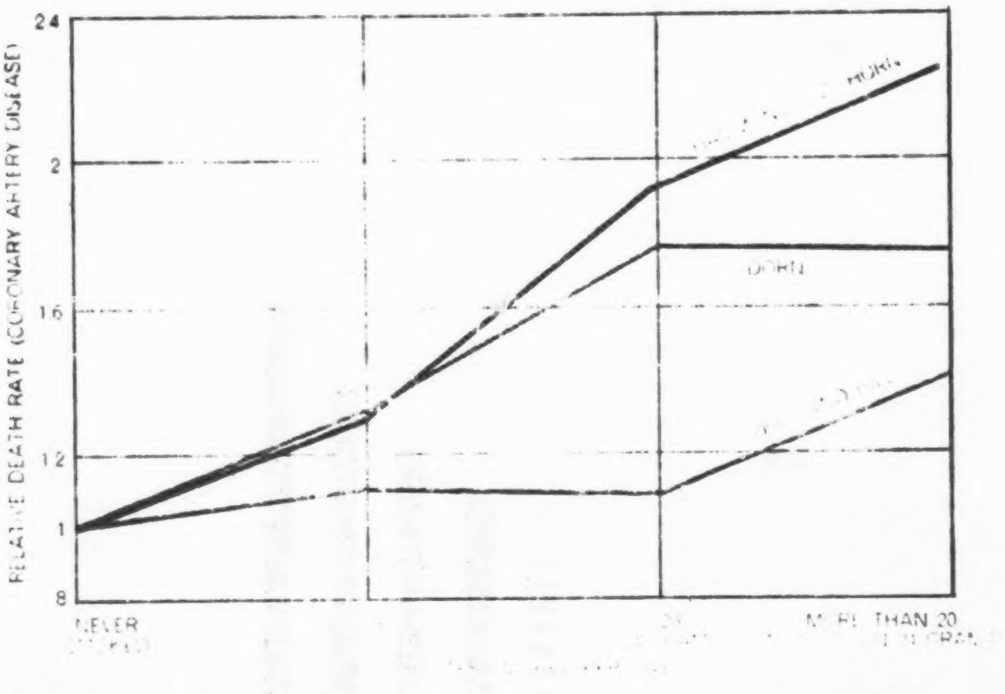


LUNG CANCER as a cause of death increases with the number of cigarettes (or gram equivalent) consumed per day, according to three major studies cited in the text. "Relative death rate" is the death rate among smokers divided by the death rate found among nonsmokers.



CORONARY ARTERY DISEASE as a cause of death also increases with the cigarettes smoked per day. The relative death rates are lower than for lung cancer because coronary artery disease is the leading cause of death among nonsmokers as well as among smokers.

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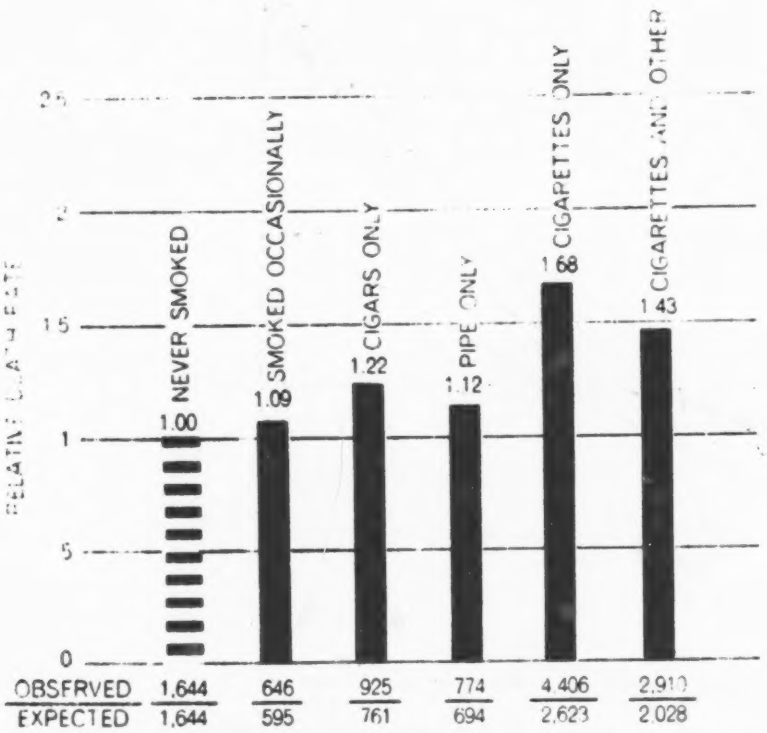
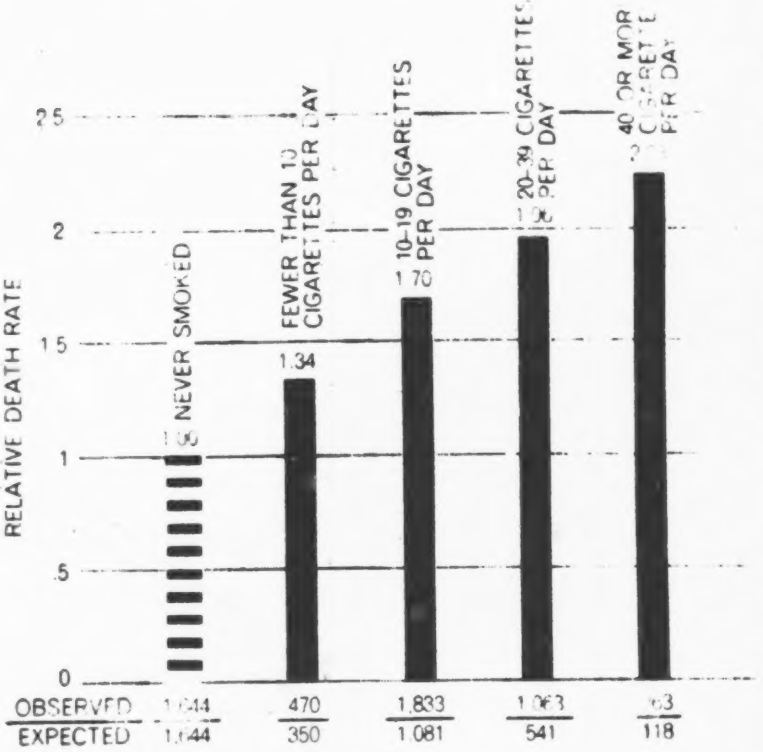
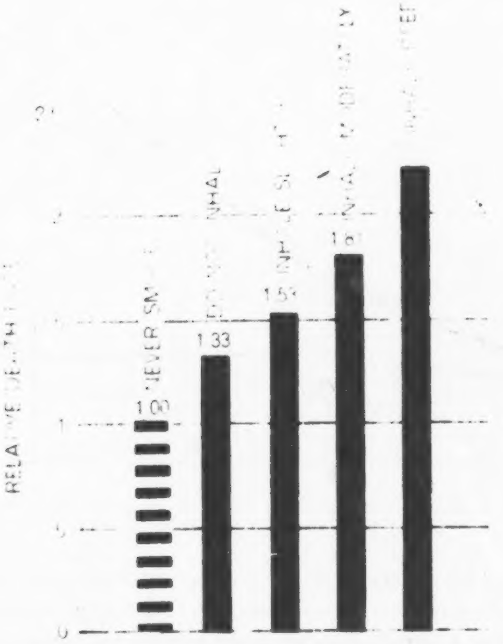


DEATH RATE FROM ALL CAUSES in Hammond and Horn study was far higher among cigarette smokers than among men who never smoked, but only slightly higher among pipe and cigar smokers.



DAILY CIGARETTE CONSUMPTION showed a direct correlation with relative death rate from all causes. The study followed [illegible] men between the ages of 50 and 69 for 44 months.



DEGREE OF INHALATION among cigarette smokers is charted against relative death rates from all causes. Rates are based on the author's new study of [illegible] men and women, which was begun in 1959.

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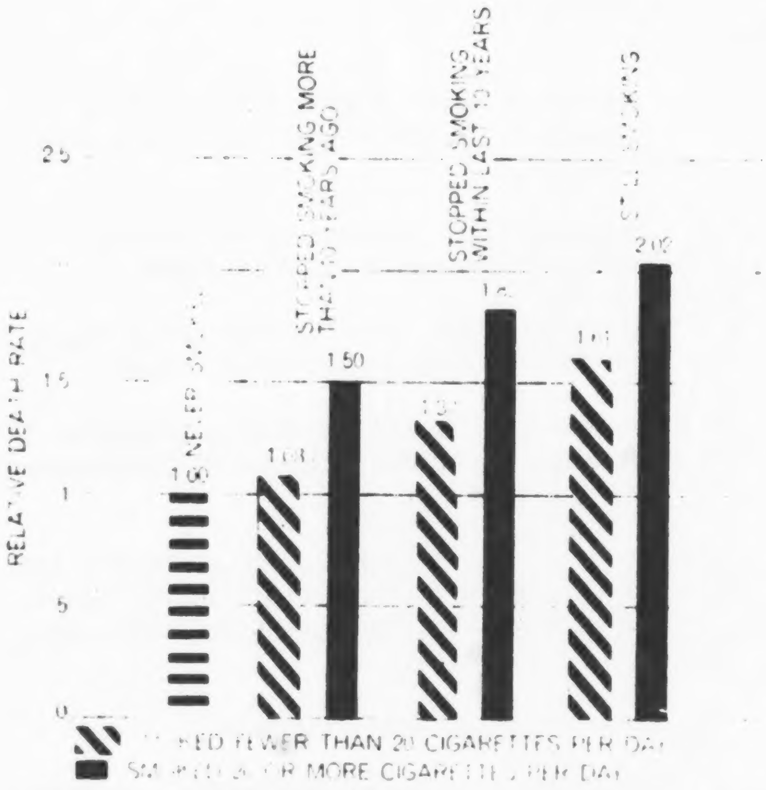
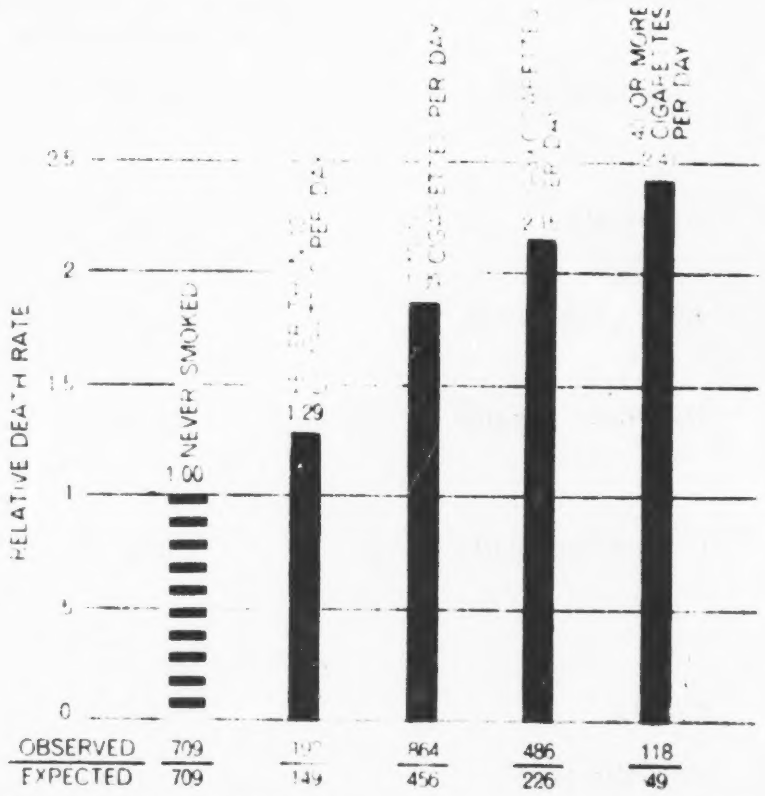


FORMER SMOKERS had a lower relative death rate than those still smoking, particularly if they had smoked fewer than 20 cigarettes a day and had stopped smoking for at least 10 years.



CORONARY ARTERY DISEASE, which accounted for 52.1 per cent of excess deaths among regular smokers of cigarettes, was also correlated very closely with the smoker's daily cigarette consumption.

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ELEMENTARY LESSON ON

Chemical Makeup of Tobacco and Tobacco Smoke

Introduce lesson by simply stating that the class is going to inspect a few chemicals. List the chemicals in Column A and elicit from the class what they know about these substances. Column B shows some answers plus other pertinent material.

A		B
NAME	CHEMICAL SYMBOL	PROPERTIES
Nicotine	plant genus Nicotiana U.S. species (tobacum)	deadly poison
Formaldehyde	$HCHO$ -	colorless, preservative for biological specimens, poison often used as a disinfectant
Ammonia	NH_3	cleaning fluid, component of smelling salts, irritating to nasal passages
Hydrogen sulfide	H_2S	poisonous gas (smells like rotten eggs), irritating component of most "smog"
Hydrogen cyanide	HCN	poisonous gas--ALL cyanides should be handled carefully. Checks oxidation process in protoplasm
Carbon monoxide	CO	deadly gas (exhaust of cars), 1 part in 100 parts of air is lethal in 10 minutes. Colorless, odorless, damages blood cells, produces suffocation
Arsenic	As	extremely poisonous element
Carbolic acid (phenol)	C_6H_5OH	germicide, powerful antiseptic, disinfectant
Methanol (wood alcohol)	CH_3OH	causes intoxication, blindness, coma, even death

Cigarette Tar-Separating Apparatus

PURPOSE: To separate tars from tobacco

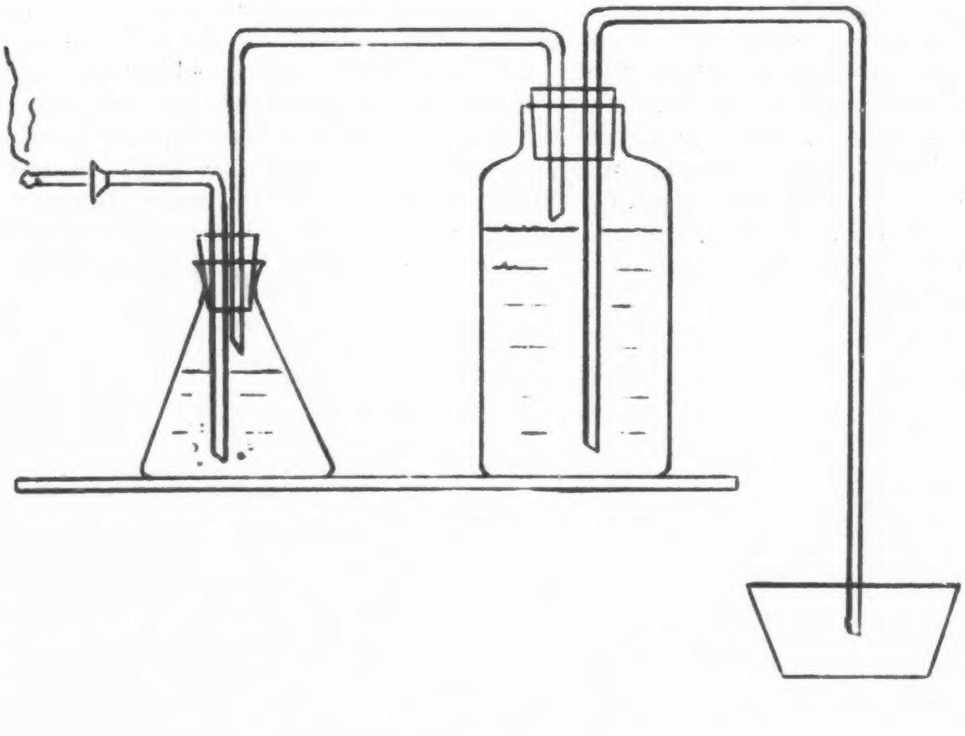
TIME: 15 minutes

EQUIPMENT AND SUPPLIES:
- Small jar with a two-hole stopper
- Large gallon jar with a two-hole stopper
- Bucket or pan
- Several cigarettes
- Delivery tubes
- Cigarette holder

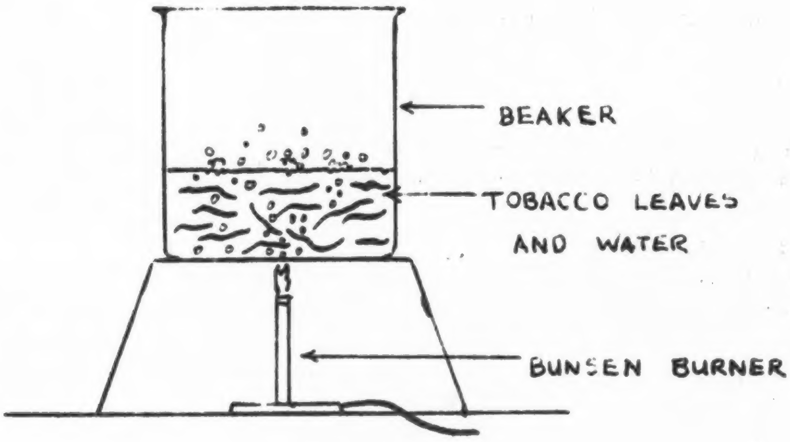
PROCEDURE:
Assemble the cigarette tar separating apparatus as shown in the diagram.
Fill the small jar half-full of water.
Fill the large jar to the top with water.
Place a cigarette in the intake and light it.
Start the flow of water from the large jar into the bucket by sucking the water in the outlet tube to start the water siphoning out of the large jars and cause the cigarette to burn. The tars will collect in the water in the small jar.

Allow the cigarette to burn completely (add more water to the large jar if necessary to maintain suction).

Examine the water in the collecting jar. Smell this liquid. Taste a tiny drop. What color do you note?



Poisonous Agents in Tobacco Leaves

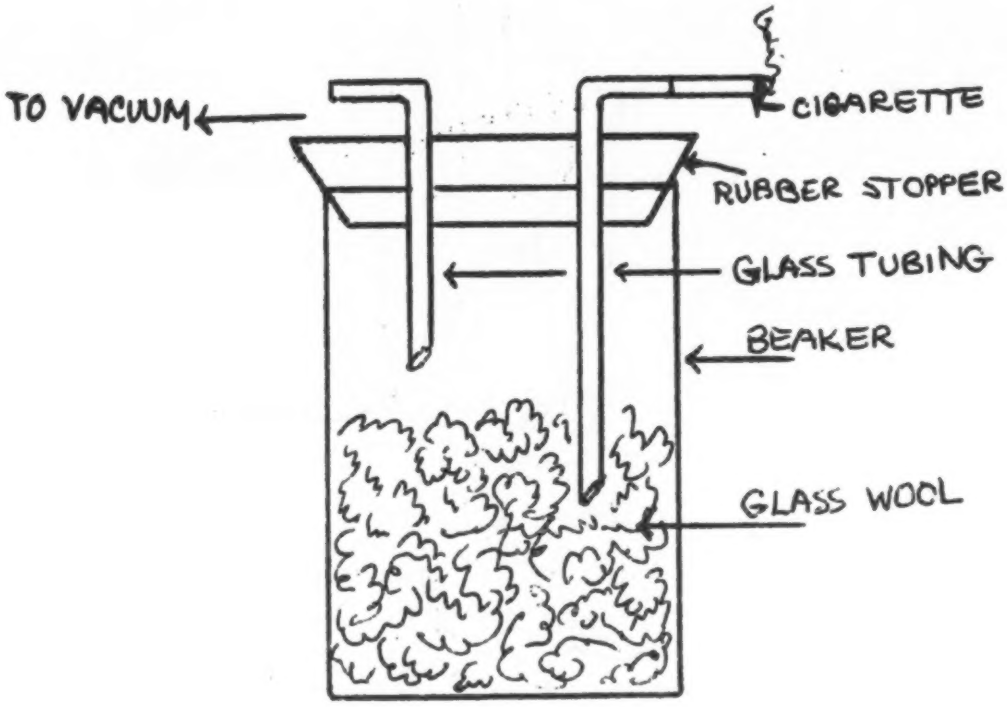


PURPOSE: To demonstrate the poisonous agents that are present in tobacco leaves

EQUIPMENT: 1 or 2 white mice, water, tripod, cigarette, filter, bunsen burner, small syringe, 27 gauge needle, 100 cc beaker, filter paper

PROCEDURE: Place 10 cc of water into the 100 cc beaker. Bring the water temperature to the boiling point and maintain the temperature at a slow boiling heat. Take the tobacco from one cigarette and add to the boiling water. Stir slowly at constant heat for five minutes. Turn off the bunsen burner and allow the solution to pass through standard laboratory filter paper into a clean beaker. Allow the solution to cool. Draw between 1/4 and 1/2 cc of the filtered solution into the syringe. Now as you examine your mouse, you will find that the veins of the tail are quite prominent as light blue streaks. Insert the needle of your syringe into the vein and inject 1/4 to 1/2 cc of the filtered solution. Within a minute, the animal will enter a convulsing state, which in most instances will lead to death. While the nicotine in one cigarette is sufficient enough to kill many mice, there is enough nicotine in a cigar to kill two men.

Harmful Effects of Tobacco Smoke



PURPOSE: Collecting tobacco tars from cigarettes and conducting biological studies

EQUIPMENT: 6-10 white mice, aspirator or water pump, flask, beaker or bottle, acetone, electric clippers, eye dropper, rubber tubing, stopper with glass tubing holes, glass tubing, glass wool, cigarettes

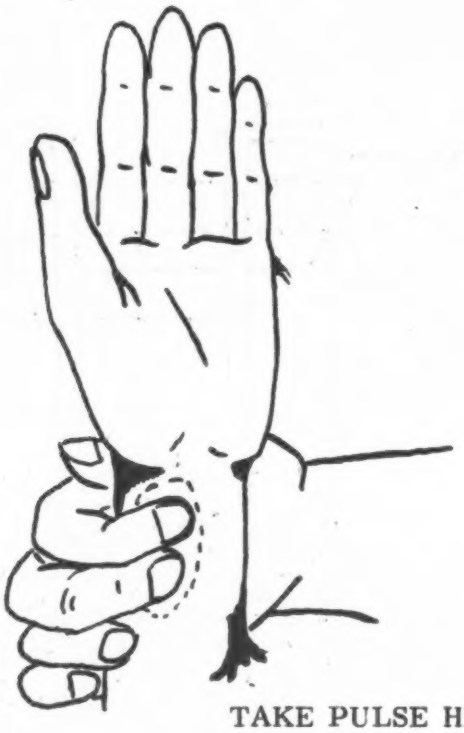
PROCEDURE: Hook a vacuum line (from an aspirator or water pump) to a burning cigarette in such a manner that the cigarette is consumed in about 4-6 minutes. (Several glass tubes fitted with cigarettes can be smoked simultaneously depending upon the number of holes made in the rubber stopper.) In the line, a trap containing glass wool moistened with acetone should be attached. This will collect most of the tobacco tars. See diagram. The distillation of the tar can be facilitated by placing the bottle in an ice water bath during the course of the experiment.

After the cigarettes (about 40 cigarettes per day) have been smoked, the tar can be removed with additional acetone--using as little as possible to dissolve the tar. This solution should be allowed to stand for several hours in a fume hood to concentrate the tar. A vacuum distillation method in a warm water bath without flame is effective.

BIOLOGICAL STUDY: The backs of mice should be trimmed with electric clippers to remove heavy hair growth. The tars from about three (3) cigarettes can be applied by eye dropper twice (2) daily to the clipped area, five (5) days a week.

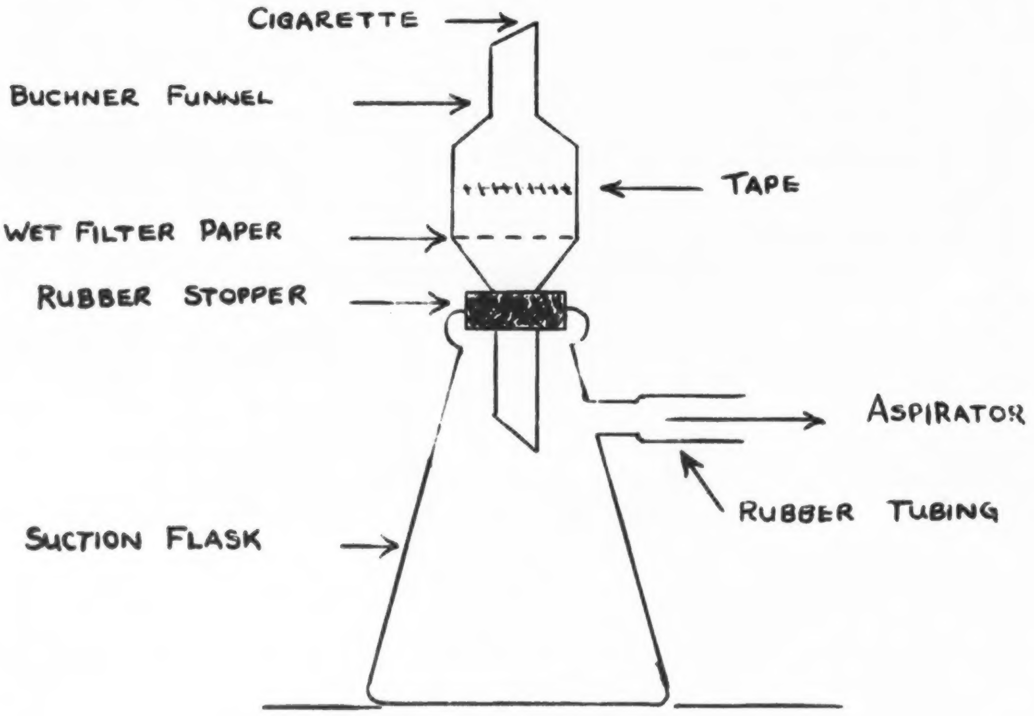
Tumors can be expected to appear in about 40% of the mice in 6 to 9 months. These will be both benign and malignant tumors.

Effect of Cigarette Smoke on the Pulse



PURPOSE:	To demonstrate the effect that smoking has upon the heart rate
EQUIPMENT:	1 wrist watch, 1 smoker, cigarettes
PROCEDURE:	It is recommended that students do this experiment on their parents at home and record their findings. The arterial pulse, taken at the wrist, is an accurate indication of the heart rate. One can take the pulse of his patient by placing two middle fingers of the right hand on the thumb side of the wrist of the patient (see diagram). The patient's pulse should be taken two or three times to establish a base line accuracy. In each instance, record your pulse rate as the number of pulsations felt per minute. Have your patient light a cigarette, then take the pulse as he has concluded the 3rd or 4th puff. When the cigarette is finished, take the pulse every fifteen minutes until the pulse rate returns to normal. Chart your findings on a graph and determine how many extra heart beats one pack of cigarettes causes the patient. Since with each beat the heart pumps approximately 70 cc of blood, calculate the extra volume of blood that is pumped by the heart induced by smoking one package of cigarettes. The apparent conclusion is that smoking puts an extra unnecessary load upon the heart and with such a burden will, in the long run, shorten life.

Collection of Tars in Tobacco Smoke

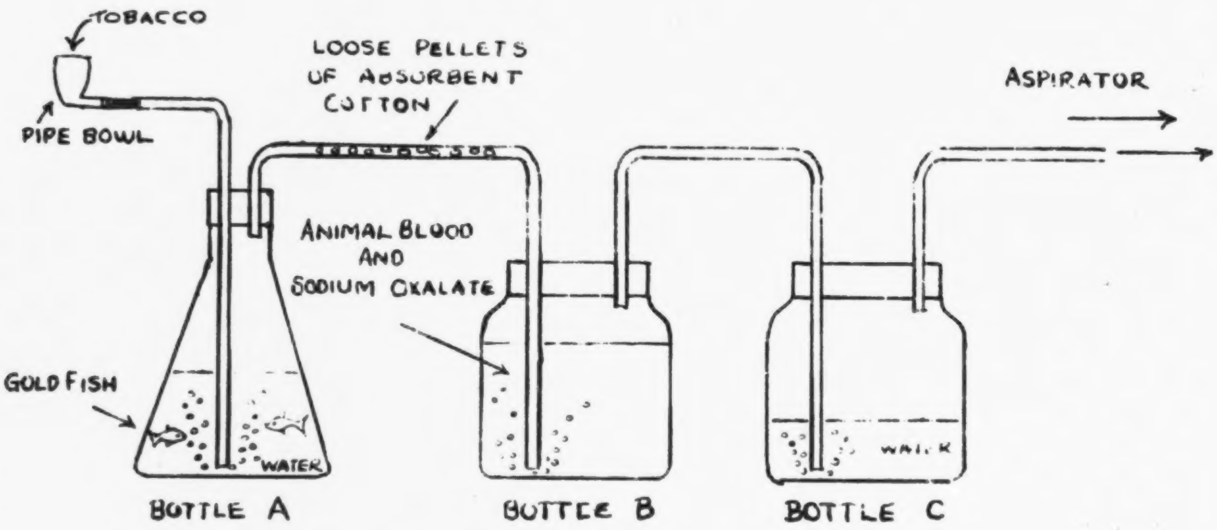


PURPOSE: To demonstrate the tars present in the smoke of a cigarette

EQUIPMENT: 1 regular funnel, 1 buchner funnel, filter paper, suction flask, vacuum source, single hole rubber stopper

PROCEDURE: Place a cigarette in the top funnel as indicated in the diagram. Turn on your vacuum source and light the cigarette. The smoke from the cigarette will pass through the funnels and the wet filter paper into the suction flask. The moistened filter paper will collect a portion of the tar in the smoke, resulting in a dark yellow stain. Some tars that pass through the filter will condense in the moisture in the suction flask and a yellow solution will be noted. With this simple apparatus, one can grossly determine the answer to some interesting questions. Which brand of cigarette leaves the greatest tar residue? Do some cigarette manufacturers use stronger tobacco in their filter cigarettes to compensate for the lack of taste? Which filter is the most effective in cutting down the amount of tar which is inhaled? In conclusion, it is to be noted that the smoke from all types of cigarettes causes cancer in animals under experimental conditions.

Toxic Effect of Cigarette Smoke



PURPOSE: In the smoke delivered from a cigarette there are at least 300 toxic compounds. Most of them are not readily recognized by name, but a few such as lead, arsenic, cyanide, nicotine, formaldehyde, and carbon monoxide are well known. The purpose of this experiment is to demonstrate the effect cigarette smoke can have on fish when they are compelled to absorb the chemicals in cigarette fumes.

EQUIPMENT: 2 or 3 goldfish, 500 cc flask, glass tubing, cigarettes, water, cotton, a vacuum source (siphon or aspirator), rubber stopper with glass tubing holes, quart jars.

PROCEDURE: Hook a vacuum line (from an aspirator or siphon) to a burning cigarette in the manner described in the above drawing. As the vacuum is applied, the smoke from the cigarette will bubble through the water. By the time three to ten cigarettes have been consumed, the toxic agents in the smoke, primarily nicotine, should begin to affect the fish, causing them to lose their equilibrium and begin to roll to one side. They should be removed from the water and placed immediately in fresh water. If this is not done promptly, this experiment will be fatal to the fish.

Bottle B is for testing the effects of carbon monoxide in tobacco smoke on animal blood. The blood can be obtained in a butcher shop, though it will probably have to be ordered ahead of time. Keep the blood from coagulating by adding one part sodium oxalate solution to 9 parts of blood. Smoke coming through the tube from bottle A to bottle B will cause the blood to turn a deeper red as the hemoglobin takes on carbon monoxide. As a result, carboxyhemoglobin is formed. This is what happens in carbon monoxide poisoning. The hemoglobin loses its ability to release oxygen. You can show this by adding a fresh yeast culture to the blood. Also add a yeast culture to a control batch of blood. In the control, yeast enzymes cause the hemoglobin to release oxygen, which comes off as bubbles in a foam at the surface. In the experimental bottle, this oxygen release is impaired.

Bottle C is simply a trap to keep blood from frothing into the pump or aspirator.

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"Hankie" Test

PURPOSE: To demonstrate the tars that are inhaled into the mouth and lungs of a cigarette smoker. Of particular interest will be the difference in the amounts of tar in the inhaled smoke and in that which is exhaled.

EQUIPMENT: 1 white handkerchief, 1 smoker

PROCEDURE: Have the smoker inhale from a lighted cigarette, making every attempt to hold the smoke just in his mouth without allowing it to go into the lungs. As rapidly as possible, after inhaling from the cigarette, place a handkerchief over the mouth stretched as firmly as possible and blow the smoke back through the handkerchief. You will note that this will cause quite a dark stain on the handkerchief. Now have the candidate inhale once more from the cigarette only this time allowing the smoke to go well into the lungs. Now again, place a different area of the handkerchief firmly over the mouth and exhale back through the handkerchief. It will be noted that the second stain is much lighter than the first stain. Theoretically, the difference between the two stains represents the amount of tar that remains in the lungs with each puff of the cigarette. The harmful effects and cancer producing properties of these tars are well known.

Glossary

Addict	one who continues a habit and has an overpowering need to continu
Air pollution	matter which gets into the air as a result of man's activities
Alveoli	tiny air sacs at the end of each bronchiole
Ammonia	chemical used in manufacturing fertilizer and explosives; it is harmful to the body
Antidote	a remedy to counteract the effects of poisons; something that relieves
Arsenic	a poison used in weed killer and insecticide
Arteries	blood vessels leading from the heart to all parts of the body
Benign	not threatening to life or health
Blood pressure	pressure exerted when the heart is contracting and relaxing when the heart is contracting, pressure is called systolic; in babies the systolic pressure is about 75-90 mm. of mercury; in young adults it is 100-130; in older persons it is 130-150; diastolic pressure is from 30 to 50 mm. below systolic; diastolic pressure occurs when the heart is relaxing
Bronchi	two main branches of the trachea; they are called bronchial tubes
Bronchiole	one of the smallest divisions (branches) of the bronchial tubes
Bronchitis	inflammation of the bronchial tubes
Cancer	any malignant tumor
Capillary	the smallest of the blood vessels where exchange of blood is made between arteries and veins
Carbon dioxide	gaseous waste material given off by the body through the lungs
Carbon monoxide	colorless, odorless, poisonous gas
Carcinogen	substance or agent causing development of cancer
Carcinoma	a malignant tumor
Cardiovascular	pertaining to the heart and blood vessels
Cell	a unit of living matter which makes up all living things
Chest	upper part of the body in which the heart and the lungs are contained
Chronic	continuing for a long time
Cigarette	finely chopped tobacco rolled up in paper and used for smoking
Cilia	tiny hair-like processes found in various parts of the body, which help propel fluids or particulate matter
Circulatory	pertaining to the circulation of the blood through the body
Cobalt	chemical element; radioactive cobalt is used in treating cancer

Combustible	capable of burning; easily kindled
Commercial	advertising used on T.V.
Coronary	pertaining to coronary arteries which supply blood to the heart itself
Diaphragm	muscular partition located at the bottom of the chest cavity; used in breathing
Economic	pertaining to the earning, distributing, and using of money
Emphysema	a disease of the lungs involving over-inflation of the alveoli; from a Greek word meaning inflation; the swelling or inflation of the tissue is due to the presence of gas
Exhale	to breathe out
Exterminator	something or someone that utterly destroys or drives out
Fact	a truth; that which is known to be true
Filter	porous material used to remove impurities
Fluoroscope	a type of x-ray machine by which a doctor can observe directly the heart and lungs at work
Function	action for which a thing is used
Gases	vapor; matter having no definite shape; no definite volume
Habit	that which has been done so many times that it becomes automatic
Heart	organ which pumps the blood through the circulatory system
Heart beat	pulse; complete pulsation of the heart
Inhale	to breathe in
Indians	race found in America by Columbus: native Americans
Insecticide	poison which is used to kill insects; a spray or dust
Larynx	the voice box; upper end of the windpipe where the vocal cords are located
Leucocyte	white corpuscle; see phagocyte
Liquid	fluid such as water
Lungs	two organs of breathing in which blood gives up water and carbon dioxide, then receives oxygen
Lymph	clear water fluid found in lymph vessels
Lymph nodes	gland-like structures in the lymph system that make lymphocites (one type of blood cell) and filter lymph fluid
Malignant	extremely dangerous: usually associated with spreading cancer
Mucous membrane	a membrane which lines the respiratory and digestive tract
Mucus	a sticky liquid secreted by mucous gland of the mucous membrane

Nicotine	a poison found in cigarettes; passes through the lining of the mouth: affects the heart and circulatory system
Nose	organ in respiratory system through which air enters the body
Organ	structure made of various cells which performs a specific function in the body
Organism	anything that has life in itself
Oxygen	colorless, odorless, gaseous element; necessary for life; oxygen makes up 1/5 of the total volume of the atmosphere
Phagocyte	a white corpuscle; a blood cell that destroys micro-organisms or harmful cells by enveloping and absorbing them
Pharynx	part of alimentary canal between the mouth cavity and the esophagus
Physiology	science which treats (studies) functions of the human body
Plant	vegetable life, as opposed to animal life
Poison	a substance which destroys life or impairs health when introduced into a living organism
Radioactive	capable of giving off radiant energy; this property is passed by some elements such as radium and uranium
Radium	shining white metallic element, used in treatment of cancer; also used in luminous materials such as paint on the dials of watches, clocks, and instruments
Respiration	act of breathing, made up of inhaling and exhaling
Respiratory	pertaining to breathing
Roentgen	x-rays; founded by William Roentgen who named the unknown factor "x"
Rupture	to burst or break apart violently
Silicosis	an occupational disease of the lungs, caused by inhaling silica dust, from sand, quartz, or granite
Smog	a combination of smoke and fog
Smoke	to inhale and exhale smoke from burning substance such as tobacco
Smoking machine	a machine to demonstrate results of smoking cigarettes
Statistics	numerical facts systematically collected and classified
Suffocation	death from lack of oxygen; smothering
Survey	a generally systematic view or examination of the main features of anything
Tars	thick brownish-black substance; sources of chemical substances consisting of a mixture of hydrocarbons and their derivatives; injurious to the body
Tissue	a group of like cells which do a certain kind of work, such as brain cells
Tobacco	the plants whose leaves are smoked
Trachea	the tube from the larynx to the lungs

Tumor	abnormal swelling or a mass of new tissue, growing independently and having no physiological use
Veins	blood vessels leading back to the heart from parts of the body
X-ray	an invisible ray which can penetrate the body and make it possible for doctors to see human bones; x-rays are sometimes known as Roentgen rays, named for the discoverer, a German professor, Wilhelm Konrad Roentgen

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REGIONAL EDUCATIONAL MEDIA CENTERS

A considerable amount of excellent material relative to smoking has been placed in most of the Regional Educational Media Centers by the American Cancer Society, Iowa Division, Inc. These materials include films, filmstrips, charts, pamphlets, posters, and booklets. School personnel are urged to contact their respective centers for listings of these materials. Direct contact may also be made with the American Cancer Society, Iowa Division, Inc., in the event that a particular center has not been stocked as yet or is temporarily out of stock of a given item.

FIELD TRIPS AND RESOURCE PEOPLE

1. *Fire Stations*
Fire station field trips and resource people may be obtained by arranging with the local fire captain.

2. *A resource person*
May be obtained from chemical and/or insecticide companies.

3. A local physician is probably available for speaking to groups on the subject of smoking.

4. *Lists of qualified speakers*
Have been compiled by health agencies, with broad geographical distribution. Teachers desiring speakers for classes, PTA meetings, etc., can contact the speakers listed directly, or can call their local unit of the Heart, Cancer, or Tuberculosis Associations, or local health department or county medical society.

16 mm FILMS

1. *A Breath of Air*
21 minutes, color. This film was devised primarily for use in secondary schools and colleges; other showings should be effective with parents and interested adult groups. Its purpose is to help convince young people that cigarette smoking can cause serious illness and death. Many scenes feature young people, their interests and concerns. A highlight of the film is a case study presentation of an emphysema patient.

   A User's Guide includes suggested exercises, questions, references. Pamphlet: Your Health and Cigarettes American Cancer Society

2. *Barney Butt*
12½ minutes, color. A story of the heart and hard times of a comical, sometimes pathetic, cartoon character from his infancy, through teenage adventure, smoke-blighted romance, short-winded attempts at sports, failure in work. With its humorous and inventive sequences the film is entertaining but as it drives to its climax, there is no doubt about the message: where there's cigarette smoke, there's danger from heart disease - no if's, and's, or butts! – Iowa Heart Association.

3. *Battle To Breathe, The*
25 minutes, color, (1968). Film on

emphysema which utilizes three actual case histories. All three men were smokers.--Iowa Tuberculosis and Respiratory Disease Association.

4. *Beyond Reasonable Doubt*
   25 minutes. American Temperance Society.

5. *Cancer by the Carton*
   30 minutes, color. Grades 9-12 and adults. American Temperance Society, 1958.

6. *Embattled Cell*
   21 minutes, The actual behavior of living cells -- both normal and cancerous -- within the human lung are shown. In time-lapse photography and other sequences the viewer sees with startling vividness the struggle of the body's defensive cells against individual cells, the cleansing mechanism of the lung in action and the lung's blood supply and drainage systems. The sacs and their delicate capillaries are shown as these structures are affected by air pollutants such as cigarette smoke. (Released 1968) -- Reference Folder available -- American Cancer Society

7. *From One Cell*
   15 minutes. Grades 5-9. The relationship of cell reproduction and growth to the healing process is outlined. It closes with an analysis of the principles of cell growth as they relate to cancer. 1956. American Cancer Society

8. *Huffless, Puffless Dragon*
   8 minutes. This animated cartoon film uses humor and satire to emphasize the health hazards of cigarette smoking. It serves as a door-opener for more detailed treatment of the subject of cigarette smoking and health. (Released 1964) -- American Cancer Society

9. *Human Body, the Respiratory System*
   13½ minutes. color. Grades 7-12. Describes the organs of the respiratory system and shows in animation and live demonstration the mechanics of ventilation and the physics of diffusion between alveoli and capillaries. Not as specific to smoking. Coronet Films, 1962.

10. *No Smoking*
    10 minutes, color. Elementary and junior high. Presents facts on why one should not smoke. Fire and health hazards emphasized. Sid Davis Production, 1964. Illinois Dept. of Health.

11. *Point of View*
    18 minutes. Grades 9-12. Visitors from outer space mimic behavior of earth men and women. Ends on you and your point of view. 1965 -- Iowa Tuberculosis and Respiratory Disease Association

12. *Presentation Reel (Schools)*
    19½ minutes, color. This school presentation reel is intended to permit rapid preview of suitable ACS films by school administrators and teachers, as an aid for the selection of specific films needed to meet specific school curriculum and teaching needs. Short excerpts are shown from films on cigarette smoking and health (*A Breath of Air; The Huffless, Puffless Dragon; A Time for Decision; Smoking: Past and Present*) and films related to science studies and careers (*From One Cell: The Human Cell and the Cytotechnologist; Cracking the Code of Life; In a Medical Laboratory; The Embattled Cell*). American Cancer Society.

13. *Smoke*
    10 minutes. Adult. This is a very funny, albeit vulgar, ridicule of the smoker. A special sort of audience needed. Film may be rented for $6.00 from Berkeley Film Library Extension. U. of C., 1965.

14. *Smoke, Anyone?*
    9 minutes, color. Elementary grades. Presents message on "what you do now will decide your future." Iowa State Department of Health.

15. *Smokey the Bear*
    Shows the result of what a careless camper or smoker can do to forests. U.S. Forest Service.

16. *Smokey*
    Primary children will enjoy. U.S. Forest Service.

17. *Smoking and Heart Disease*
9½ minutes, color. This film asks and answers, with clear, colorful animation, vital questions about the relationship between cigarette smoking and health, particularly as it relates to the heart and circulatory system. It discusses the risks of cancer, emphysema, and coronary heart disease. Iowa Heart Association.

18. *Smoking and You*
11 minutes, color. All levels. Shows unglamorous situations associated with smoking and the health hazard which smoking creates. 1964. Iowa State Department of Health and American Heart Association

19. *Smoking: Past and Present*
15 minutes, color. This film is directed to young people and is probably most suitable for school grades 5-8. Intended solelv for classroom use, it is an open-ended film designed to stimulate and lead directly into classroom discussion on cigarette smoking and health after it has been shown. The film recounts the history of tobacco in a manner which ties in with social science subjects studied by students in grades 5-8. A teacher's guide is available. Pamphlet: Your Health and Cigarettes. American Cancer Society.

20. *Time Pulls the Trigger*
23 minutes, color. Graveyard scene at start followed by doctor talking to patients at Veteran's Hospital. Good animated section of film showing effects of smoking on body. 1964. American Temperance Society.

21. *The Embattled Cell*
21 minutes, 16mm, color. The actual behavior of living cells - both normal and cancerous - within the human lung are shown. In time-lapse photography and other sequences the viewer sees with startling vividness the struggle of the body's defensive cells against individual cells, the cleansing mechanism of the lung in action and the lung's blood supply and drainage systems. The film is particularly designed for science students at the secondary and college levels. Physicians, medical students and other paramedical groups would find it of interest. Showings before other adult groups should be scheduled very selectively. A reference folder is available to provide useful background information to persons using the film. American Cancer Society.

22. *Time To Stop Is Now*
8 minutes, color. Shows harmful [illegible] the body systems. American Cancer [illegible]

23. *Tobacco and the Human Body*
15 minutes. Grades 7-12 En[illegible] Britannica Films, Inc., 1150 [illegible] Avenue, Wilmette, Illinois, 1961.

24. *Too Tough To Care*
18 minutes, color. Grades 7-12. An [illegible] satire on advertising industry. [illegible] Department of Health.

25. *Up in Smoke*
23 minutes, color. Grades 7-12. A Sati[illegible] tobacco industry. Division of Cancer [illegible] 1964.

26. *Who, Me?*
22 minutes, color. Adults. Effective tes[illegible]nials and approach to stopping the smok[illegible] habit. American Cancer Society.

FILMSTRIPS

1. *Get Smart! Don't Start!*
40 film pictures with sound track made with the primary child in mind. Available from:
Dr. Richard L. Grant
Department of Psychiatry
University of Oregon Medical School
Portland, Oregon

2. *I'll Choose the High Road*
15 minutes, sound, color. Elementary grades. It explores the future opportunities and challenges and points out health aspects of smoking. Reasons why persons are led to smoke are presented. American Cancer Society.

Marginal legibility of this page is due to poor original material. Better copy is not available at the time of filming. E.D.R.S.

3. *To Smoke or Not To Smoke*
25 minutes, sound, color. Grades 7-12. It presents evidence of link between smoking and lung cancer. Designed for discussion to follow. American Cancer Society.

CURRICULUM GUIDES ON SMOKING

1. *En-Garde: Curriculum on Smoking and Health*
Roswell Park Memorial Institute, New York State Department of Health. Buffalo, N.Y.

2. *Health*
Strand 11 Sociological Health Problems (Separate publications for: Grades 4, 5, 6, 7, 8, 9, and 10, 11, 12) The University of the State of New York. The State Education Department. The Curriculum Development Center. Albany, New York 12224 – 1967.

3. *The Health Hazards of Smoking*
Division of Health Education, Cleveland Public Schools, Cleveland, Ohio, 1965.

4. *Motivating Motivators*
A practical approach to the smoking problem.
Cincinnati Hamilton County Unit
American Cancer Society
138 E. Court Street
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State of Maine, Department of Health and Welfare, Division of Cancer Control and State of Maine Department of Education, 1964-65.

6. *Smoking and Health Guide for Elementary and Secondary Schools*
Superintendent of Public Instruction, Olympia, Washington. 1966.

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Oregon Department of Education, Salem, Oregon. 1967.

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Department of Public Instruction and Department of Health, Harrisburg, Pennsylvania. 1963.

11. *Teachers Guide on Smoking and Health*
Grades 5-8 in elementary school; Grades 7-12 in junior and senior high schools. California Interagency Council on Cigarette Smoking and Health.

12. *Teachers Guide on Smoking and Health*
Grades 5-12. Rhode Island Interagency Council on Smoking. Department of Health, State Office Building, Providence, Rhode Island. 1965.

13. *Teaching About Smoking and Health*
State of Illinois, Office of the Superintendent of Public Instruction and Department of Health, Springfield, Ill. 1964.

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Spokane Public Schools; George Warner, Director, Physical Education, Spokane, Washington. 1966.

NEWSLETTERS

1. *Medical Bulletin on Tobacco*
Issued three times a year, published by the American Public Health Association, the American Heart Association, the American Cancer Society, and the National Tuberculosis Association. To be placed on the mailing list, write to: Medical Bulletin on Tobacco, Room 712, 1790 Broadway, New York, N.Y. 10019.

2. *Smoke Signals*
Published by Pacific Press Publishing Associa-

tion, 1350 Villa Street, Mountain View, California 94041. Subscription: $1.00 per year, or 16c per copy.

3. *Smoking and Health Newsletter*
Issued six times a year, published by the Interagency Council on Smoking and Health, P. O. Box 3654, Central Station, Arlington, Virginia 22230. Comprehensive coverage of latest national activities concerning tobacco and health.

PAMPHLETS

1. *A Do It Myself Chart for Breaking the Cigaret Habit*
Iowa Tuberculosis and Respiratory Disease Association.

2. *A Light on the Subject of Smoking*
An excellent 13-page booklet for sixth and seventh grades, speaking of harmful aspects of smoking; includes a quiz. Iowa State Department of Health.

3. *Answering the Most-often Asked Questions About Cigarette Smoking and Lung Cancer*
American Cancer Society.

4. *Answers to 101 Questions About Cancer*
American Cancer Society.

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Chicago: Science Research Associates, Inc., 1960.

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The World Book Science Annual, Field Enterprises, 1965.

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It's Not Too Late To Stop Smoking Cigarettes
Iowa State Department of Health.

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American Cancer Society.

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Public Health Service Publication No. 559. 1963.

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American Cancer Society.

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Iowa Heart Association.

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Iowa Tuberculosis and Respiratory Disease Association.

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American Cancer Society.

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Iowa State Department of Health.

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American Heart Association.

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Iowa State Department of Health.

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Dallas, Texas: Texas Alcohol and Narcotics Education, Inc. 2814 Oak Lawn Avenue, Dallas, Texas 75219.

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Iowa Tuberculosis and Respiratory Disease Association.

20. *Enjoy the Pleasures of Not Smoking*
Iowa Heart Association.

21. *Facts for Teenagers: Smoking, Health, and You*
Iowa State Department of Health.

22. *The Facts About Smoking and Health*
U.S. Government Printing Office.

23. *The Facts on Teen-Age Smoking*
American Cancer Society.

24. *Here Is the Evidence -- You Be the Judge*
Iowa Tuberculosis and Respiratory Disease Association.

25. *I Have a Secret Cure for Cancer*
American Cancer Society.

26. *I'll Choose the High Road*
American Cancer Society.

27. *Insurance Facts*
1965. New York: Insurance Information Institute, 110 Williams Street, New York City 10038. Gives information on causes of fire.

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Iowa Tuberculosis and Respiratory Disease Association.

29. *Nick O'Teen, the Cigarette*
Iowa Tuberculosis and Respiratory Disease Association.

30. *No If's, No Maybe's, No Butts*
Iowa Tuberculosis and Respiratory Disease Association.

31. *Questions and Answers of Smoking and Health*
Iowa Tuberculosis and Respiratory Disease Association.

32. *Reduce Your Risk of Heart Attack*
Iowa Heart Association.

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Facts About Smoking
SRA Guidance Service Series Booklet Chicago: Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois 60611

34. *Shall I Smoke?*
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Anti-Cigarette Smoking Campaign
Report of a project in DeSales High School Walla Walla, Washington.

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Iowa State Department of Health.

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Iowa Tuberculosis and Respiratory Disease Association.

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Iowa Heart Association.

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Iowa Heart Association.

51. *What the Cigarette Commercials Don't Show*
Iowa State Department of Health.

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Iowa State Department of Health.

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American Cancer Society.

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American Cancer Society.

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Iowa State Department of Health.

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Iowa Heart Association.

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Iowa Tuberculosis and Heart Disease Association.

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Iowa State Department of Health.

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Reader's Digest, June 1962.

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Today's Health, 43:12, August 1965.

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American Journal of Public Health, 54:1922-1923, November 1964.

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Des Moines, Iowa 50312

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535 North Dearborn Street
Chicago, Illinois 60610

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6840 Eastern Avenue, N.W.
Washington, D.C. 20012

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Washington, D.C. 20402

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Washington, D.C. 20201

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Lucas State Office Building
Des Moines, Iowa 50319

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1818 High Street
Des Moines, Iowa 50309

10. U.S. Forest Service
Department of Agriculture
210 Walnut
Des Moines, Iowa 50309

KITS AVAILABLE

Available from American Cancer Society Office (Order by Title): Teacher, Research, Smoking, Career, Student, Poster.

POSTERS

Cigarette Smoke Is Harmful!
Cigarettes Shorten Lives
100,000 Doctors Have Quit Smoking Cigarettes

Try a Brand New Switch. Quit. 30" x 60"
My Dear, This'll Kill You. 28" x 44"
Iowa Tuberculosis and Respiratory Disease Association.

Guard Against Heart Attack Posters (set of 6) 11" x 14"

Reduce Your Risk of Heart Attack (wallet card)
Iowa Heart Association.

Cigarette Smoke Is Harmful!
Cigarettes Shorten Lives
100,000 Doctors Have Quit Smoking Cigarettes
Try a Brand New Switch. Quit. 30" x 60"
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